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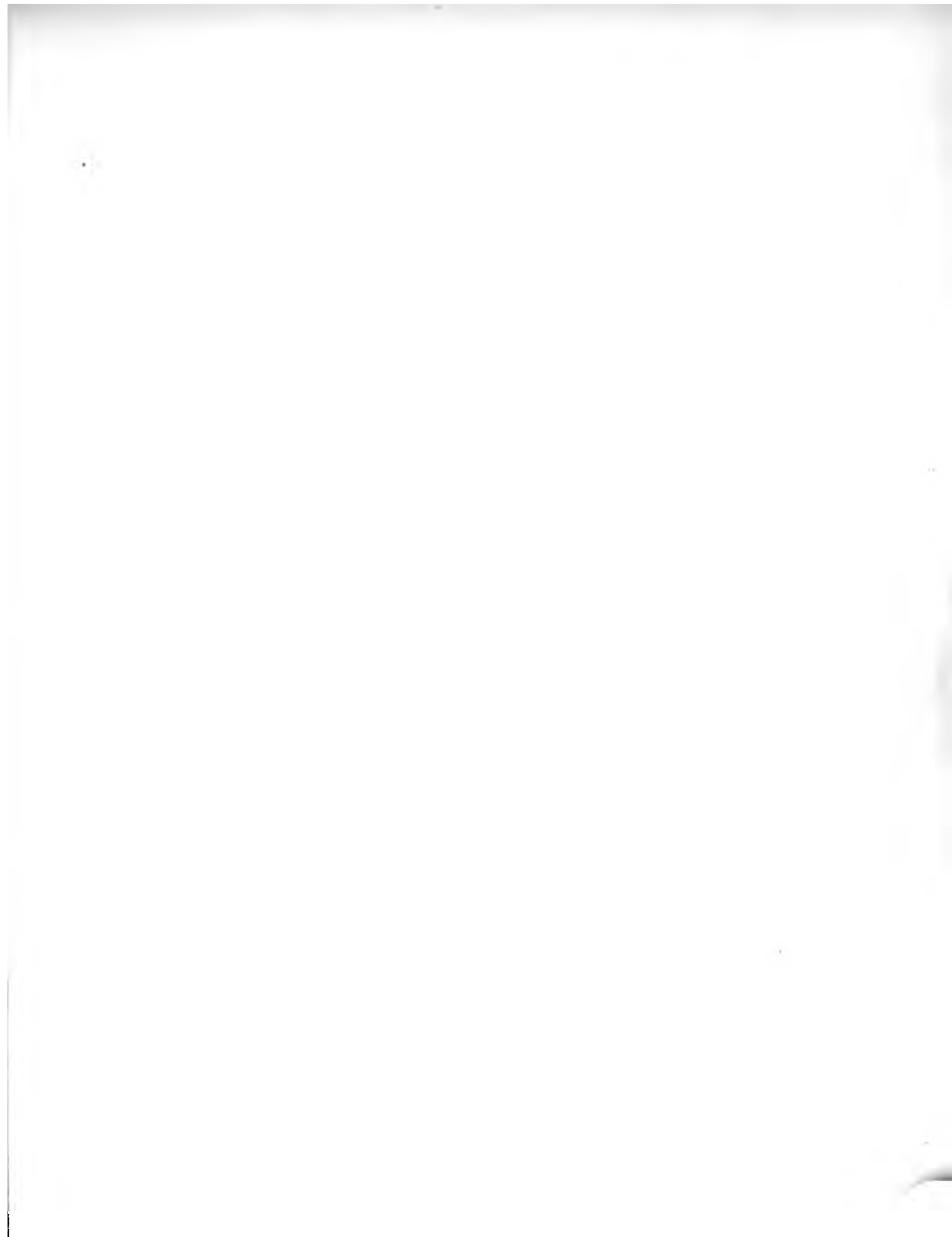
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THE
AMERICAN TEACHER.

DEVOTED TO THE

Methods and Principles of Teaching.

A. E. WINSHIP,

W. E. SHELDON,

Editors.

VOLUME V.

[From September, 1887, to June, 1888, inclusive.]

BOSTON :

NEW ENGLAND PUBLISHING COMPANY :

1888.

G. Z.

Educ P105.14

Educ P211.10

HARVARD UNIVERSITY
HARVARD GRADUATE SCHOOL OF EDUCATION
GRADUATE SCHOOL OF EDUCATION

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AMERICAN TEACHER.

WITH SUPPLEMENT.

{ Old Series, Vol. XL., No. 1. }
{ New Series, Vol. V., No. 1. }

BOSTON, SEPT., 1887.

{ Price, \$1.00 a Year. }
{ NEW ENGLAND PUBLISHING CO. }
3 SOMERSET ST., BOSTON.

IN MY SCHOOLROOM.

BY MARY E. HOYT.

EAGER faces shining
With the morning light,
Rosy little fingers
Folded close and tight.

Brown hair, soft and silky,
Shining golden curls,
Restless heads close shaven,
Teeth like rows of pearls.

Faces brown and dimpled,
Faces fair and sweet,
Red lips, fresh as rose-buds,
Noisy little feet.

Rosy flower faces
Upward turned to mine,
Blue and brown and gray eyes,
How they dance and shine!

Still and bright and glowing,
Waiting for my speech,
Oh, what is the wisdom
That I have to teach?

Who am I to lead them
Up the shining way?
I who faint and falter,
Stumbling every day.

Clear eyes, bright with gazing
Into things divine;
Loving young hearts waiting
For each word of mine.

And I tremble, fearing
Lest some word I say
Grieve the tender spirits,
Mar the lives away.

Thou who lovest the children,
Once Thyself a child,
Gentle, strong, and tender,
Pure, and undefiled,

Smooth the path of knowledge
For the little feet;
Make the ways of wisdom
Beautiful and sweet.

Teach me, oh, I pray Thee,
Guide me all the way;
Strengthen me to lead them
Upward every day.

THE RECEPTION OF NEW PUPILS.

BY IDA M. GARDNER.

TWENTY-SIX years ago a gentleman knocked at a schoolroom door, and introduced to the teacher who answered his summons his little daughter, a child of eleven years. She was a sensitive, conscientious little creature, full of dread at the thought of a new school, a new teacher, and new companions. Grasping tightly her father's hand, she scanned with anxious eyes her new teacher's face, while in few words her limited privileges in the past and her small attainments were described.

"We have been living in the country, and have had only the district school for our children. This little one has had poor health, and I fear you will find her very deficient in comparison with others of her age. She is, however, ambitious and studious, and will, I think, give you no trouble, if you can be patient with her just a first."

The teacher was a tall, large-framed woman, with a homely face, whose plainness was heightened by her deep mourning dress, with black ruffles at neck and wrist; but there was a noble heart beneath that plain exterior, and she held out to the shrinking child a hand of welcome with such a pleasant, sunny look in her eyes that the little girl forgot her fears and gave back an answering look of pleasure.

"I can be patient a long time with a child who tries, and that I know this little girl will do."

"Oh, I will try," answered the child. "I don't know much, but I will be good."

"I am sure of that," was the confident answer, as the teacher exchanged a quick look with the father, who stooped to kiss his little daughter's face and bade her good-by.

With her small heart swelling with the desire to prove herself worthy of her teacher's confidence, little May took the seat appointed and began her new life.

The most harmonious relations existed between May and her teacher, and they were strengthened by every day's association. Eager to prove that Miss ——'s confidence had not been misplaced, the child bent her entire energies to her work, and soon put herself on a level with other children of her age.

At the end of the term there came a break. The

teacher whose commendation had been so sought and valued gave up teaching to become the wife of a missionary to the Sandwich Islands. Little May cherished for years a tiny box of wedding-cake and some pressed flowers, but forgot entirely a little gift wrought by her own loving fingers for her teacher's new home.

Years rolled by, and the child became a woman. All communication with the teacher of her childish days had long since ceased, but the influence of those few quiet words of welcome and confidence were working still and bearing fruit; for the child had become a teacher, and, remembering how those pleasant words of greeting years ago had given her courage and inspiration, she made it her earnest purpose to give to every pupil who entered her school such a welcome as should put him at once on a ground of mutual confidence.

She shook hands with the new boy, and, retaining his hand for a moment, looked down into his eyes with a sunny smile of welcome, saying, "Good morning, my boy. We are strangers now, but I hope we shall soon be very good friends. I like my boys to feel that I am their friend."

To the dull child, whose efforts at passing an examination served only to reveal a mental "confusion worse confounded," she said: "Well, that is bad, I'll admit; but I was once a backward little girl myself; so I know how to sympathize with you, and I'll help you all I can, if you'll try too."

To the boy whose eyes showed that "happy-go-lucky" spirit, ready for work or mischief as outside influences might determine, she would say: "Some of my little boys have an idea that it is manly to be naughty and troublesome. You have such a kind look in your eyes that I want you to help me. I want you to show these little boys that a large boy thinks it more manly to be gentlemanly and courteous, and not afraid of being laughed at for doing right."

Thus, out of her own experiences, May B—— was making men and women who were in turn to go out into life, carrying on the work of helping others. Why do we not, as teachers, go back to our own childish experiences to find a way to help our pupils?

Two years ago, by one of those little occurrences which we call accidents, an allusion was made in Miss B——'s hearing to the Sandwich Islands. With a love that years and separation had not chilled, she spoke of her old teacher, and found to her delight that Mrs. —— was still living and still working, though in widowhood, in her old mission field.

"I wonder if Mrs. —— would remember me! I believe I will write to her!" And she did.

Why did tears of joy course down the cheeks furrowed by toil and sorrow, as Mrs. —— read that little letter from her old pupil?

"Your confidence in me made me what I am." Will our old age bring us such letters from our pupils?

THREE LANGUAGE METHODS.

THERE are three ways in which a class takes in hand a subject upon which it is to write:

First. A subject is given, and the pupils at once take pen and paper and write,—thinking, analyzing, choosing language for their thought, as they write. This does not produce a classic essay, but it does give facility, awaken thought, and not infrequently leads to some of the brightest sayings and most telling expressions of thought.

Second. When a subject is given, ten minutes are allowed in which to think it over, arrange thoughts, plan outlines, make schemes of analysis, etc. They learn the value of such meditation after the first experience, and use these ten minutes to the best advantage. There is no yawning, mulling, dreaming, but they proceed at once to business, and a very good language exercise results from it.

Third. A subject is assigned, and a day, or even a longer time, is given for the collecting of material and maturing thought. The result, after the other methods, is an appreciation of the privilege and very creditable language work.

BIOGRAPHICAL HISTORY.

"HISTORY," says Lord Houghton, "is the sum of biography." Eliminate the lives of men from the record of events, and the residuum is husks. And yet what is done in the ordinary classroom is the feeding of husks to the more or less hungry learners, with the result of a full crop of detached dates, strategic movements in battles, miles traversed in forced marches, corps, division, and brigade commanders, exact measurements of forts and redoubts, number of men engaged on each side, and number of killed, wounded, and prisoners, *ad nauseam*. The story is all "war or rumors of war," and the details, the minutiae, are the husks given the children.

True, there is a certain glibness and pertness in the recitation when all this battle array of facts is given by the alert students to the earnest questioner, be he supervisor or teacher; but is it all worth while?

Unless proper precaution is exercised and constant drill is indulged in, each child comes to have

"Words and thoughts in nice disorder set;
And take a memorandum to forget"

all these subsoiled but barren seed. Is this the best way by which to teach history? Do you, as a teacher, like it? Do you, as a principal or examiner, favor and enjoy it?

— For the structure that we raise,
Time is with materials filled;
Our to-days and yesterdays,
Are the blocks with which we build.

— Longfellow.

BATTLE OF THE PLANTS.

BY W. S. JACKMAN, PITTSBURGH, PA.

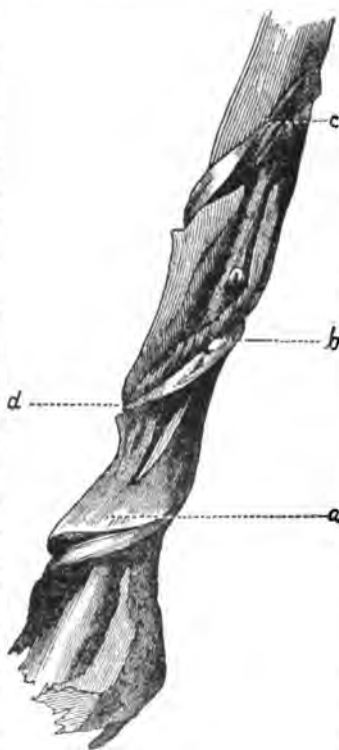
ALMOST every one now-a-days is somewhat familiar with the great conflict in nature known as the "struggle for existence." Still there are many, I doubt not, who think that this strife is chiefly confined to the animal members of Life's Kingdom, and who little suspect that the innocent looking flowers at their feet are as fierce warriors in their own way as any others of nature's children, though they have neither teeth nor nails for weapons. Among plants, it is true the conflict is silent and less sanguinary than among animals; but for all that, it is none the less decisive or tragical in the result.

Some time ago my pupils were much interested in finding what they not inappropriately termed a hand-to-hand conflict between a sumach (*Rhus typhina*) and a climbing bitter-sweet (*Celastrus scandens*). Judging from appearances when found, the sumach was about two inches in diameter when the bitter-sweet first wound its coils about it. As the growth of each proceeded, these coils became tighter and tighter, cutting into and through the bark and growing layer of the sumach until it seemed to be threatened with strangulation. It was not, however, to be so easily vanquished.

It resolutely kept up its manufacture of new material, which, owing to the tight embrace of the vine, had to be distributed along a spiral line immediately above the coils, as shown at *a*, *b*, *c*. Just below the coils, the supply appeared to be cut off, as the trunk was then shriveled, and in most places dead.

Although rendered unsightly, the tree presented the curious features of having two spirals, one of living, growing, the other of dead and decaying material wound about its heart-wood, so that the hole resembled a huge gurgur. To avenge this

formity, the sumach proceeded to push its new growth out above and over the coils of the vine until at one place, it had completely encompassed it. The vine, in turn, was now so tightly squeezed as to be cut off from communication with the ground, and below this point but little life remained. Victory now seemed within the grasp of the sumach. The vine, however, in its last extremity



now united itself with the growing layer of the sumach, and thus literally drew from the camp of the enemy whatever supplies were needed to keep its top bright and thrifty. At this stage the conflict was cut short by the ax of the collector, and the combatants, locked in each other's arms, were laid away among the curiosities of our museum to form the subject of a number of suggestive lessons.

LANGUAGE TALKS.

BY LULU M. BAGLEY.

THE earliest stages of mental development are always accompanied by efforts to express thoughts and feeling, and so the wants of children demand less of any other branch of learning which our schools give than they do of language. The greatest of all arts is that of using words. Teach the children this art, educate them in it, and their thinking will be more orderly and practical, their progress in all school studies more rapid. Accuracy in language favors uprightness of heart, and pure thoughts are all the better for being expressed in purest words. How shall we teach children to express their thoughts clearly and fluently? By developing their mental powers and training them to express in fitting language the ideas gained. As we develop the muscles by using them, or train the voice by judicious exercises, so by practice we may cultivate careful habits of thought and the art of expression with comparative ease, and in time even with grace. The use of spoken language naturally precedes that of written, and to impart fluency to the former there are various exercises which the ingenious teacher may, with advantage, bring to her aid. Conversations about things which the children daily see, use, or wear will usually prove interesting for these first lessons. And just here let us emphasize this,—sight and hearing are special senses to be carefully and correctly cultivated, for accurate perceptions are absolutely necessary for right conceptions. It is no easy task to train young children to state accurately the form, color, or size of even familiar objects, but this should be required often, and little by little, by advances made which, if adapted to the age and mental capacity of the learner, will secure accurate and systematic development of the higher faculties.

One of the first things that a child should learn in school is to talk well. We must, in correcting the construction of the sentences, insist upon distinct enunciation. A teacher of a class of children entering upon the second year of school life made a practice of giving five minutes each morning to asking and answering questions wherein mistakes, made on account of irregular formation of words, occurred. For example,—

Teacher.—John, when did you see Henry?

John.—I saw him before school.

Teacher.—Alice, please lend me your sponge.

Alice.—I haven't any.

Teacher.—John, may I have your long pencil?

John.—My long pencil is broken.

Kate.—Miss Blank, please lend me your knife.

Kate.—Thank you; [not the lazy "Thanks."]

When these children reached the third grade the teacher in charge did not have to spend time correcting such sentences as, "I seen him this morning." "I aint got no pencil." "My pencil is broke," etc.

Another exercise in oral language, suitable for children in second and third years of school life and productive of imaginative training, is to furnish each child with an interesting picture and ask him to tell you a story about it. You may receive but one sentence at first, but encourage them to make them longer, and you yourself may give one or two very simple ones. They will in a short time acquire aptitude for the exercise. Again, allow the children to select an object to talk about, then allow each child to tell the class what he or she may know about the object, interfering as little as possible. In the reading lesson, select a picture,—ask the children to describe what they see *without being questioned*, and let it be understood that the longer one can continue the better; they should be encouraged to make their descriptions as full as possible and to draw conclusions from them.

An excellent exercise for a first or second grade is to tell or read to them a short story and then ask them to tell it to you. While the child learns his first lesson in language at home, it is true that this lesson will often be incorrectly taught, and the primary teacher has much to *unteach* as well as much to teach. If the little folks have been carefully trained in the first two grades in the use of *spoken* language, it will be possible to have less incidental work and to systematize the language lessons in the third grade. We may now, with profit, begin our exercises in written language. In connection with the spelling lessons have the new words put into statement and inquiry, and every time that you get an opportunity to add an adjective to the children's vocabulary do so. Very early in this grade I would teach that three or more things of the same kind following one after another make a *series*. Write many sentences on the blackboard to illustrate. Then have the children give you sentences in which a series of name-words occur. When the class can give such sentences readily, show them how to use the comma. Now you are ready to combine statements in the form of letter or story, and by this initial work will get rid of the multiplicity of *and's* that flourish in the first attempts of children in written composition.

In the first exercises it is well to furnish the children with the material of thought. This, however, does not detract from the merits of the exercise; *children should be well acquainted with a subject before they are required to write upon it*.

The picture or object which is to furnish the subject of the lesson may be before the class, and after it has been talked about the children take their slates and write, as

nearly as they remember, all that has been said in the class. Then select a slate, copy from it,—on the blackboard,—the story told, criticising errors and allowing children to criticise. This will make the exercise a lesson in spelling, punctuation, and construction of sentences.

When they have acquired some facility in this collective work, if we may so call it, place before the class a picture or object about which there has been no conversation and ask them to write a story that will contain facts and thoughts suggested by object or picture. No two children will read the story alike; and thus we have a variety of expressed thought, and oftentimes excellent stories. I would have the children of the third and fourth grades write a letter at least once a week, always correcting misspelled words and errors in language. Among the many different exercises in written language none appear to me so productive of good results as letter-writing. By it a child may be, and *should be*, taught to give expression to his respect and affection for those about him. In these days of supplementary reading, when the childish hearts are gladdened by a budget of new books, have we not an opportunity of instilling feelings of gratitude by having each child write a short letter expressing his thanks and the pleasure derived from the books which are to be returned? Again, when the Christmas holidays come laden with tender memories of Holy Mother and Child, lead your pupils to see that no gift will please their parents more than a letter expressing the love and gratitude they bear them, and that even a costly gift will be enhanced accompanied by such a letter.

In the next paper on "Language," a schedule of work for fourth and fifth grades will be given.

ASIATIC PROVERBS.

Envy has no rest.

Desire for revenge prevents contentment.

When you have advantage over an enemy, pardon him.

One seldom finds that which he seeks, when he searches for it with impatience.

Be sincere, though it cost you your life.

Covetousness leads to poverty.

He who loves jesting brings himself into many troubles.

An avaricious man runs straight into poverty.

Many promises and many excuses make lying inevitable.

He lives in true repose who bridles his passions.

A covetous man is an enemy to the poor.

You shall only receive in proportion to what you give.

Fear the man who fears you.

Fear not the man who fears not you.

Do nothing without design.

CONCERT work demoralizes the individuality, naturalness of expression, and independence of action.

THE REVOLUTIONARY WAR.—I.

BY CHARLES F. KING, BOSTON.

CAUSES.

<i>Principal Causes.</i>	<i>Minor Causes.</i>	<i>Pupils' Side Lights.</i>	<i>Teacher's Side Lights.</i>
	I.		
	External Taxes, as	Cromwell.	George III.
I. Taxation	1. Navigation Act, 1651.	Col. Barre.	Wm. Pitt.
without	2. Act of Trade.	Sons of Liberty—	Daughters of
Representation.	Smuggling.		Liberty.
	Writs of Assistance.		
	1761.		
	II.		
	Internal Taxes, as		
	Stamp Act, 1765.		
	Its Repeal.		
	Tax on Various Articles.	James Otis.	Patrick Henry.
	Tax on Tea.	John Adams.	Samuel Adams.
	Tea Party, 1773.	Cradle of Liberty—	Faneuil Hall,
	Non-Importation.		Old South.
	1. Sending Troops.		
	2. Boston Massacre,		
	1770.		
II. Acts of	3. Burning of the		
Oppression.	Gaspee.	Gen Gage.	
	4. Removal for Trial.	Capt. Prescott defended by John	
	5. Boston Port Bill,	Adams and Josiah Quincy.	
	1774.	Attacks.	

PRELIMINARY EVENTS.

<i>Principal Events.</i>	<i>Pupils' Side Lights.</i>	<i>Teacher's Side Lights.</i>
Congresses.	Colonial Congress, New York, Oct., 1775.	Bigelow's <i>Franklin</i> .
	Provincial Congress, First Continental Congress, Philadelphia, Sept., 1774.	Bancroft's <i>History</i> , vol. IV.
	Second Continental Congress, May 10, 1775.	<i>Hist. Fields of Middlesex</i> , p. 354.
	Selected Geo. Washington, Com- mander-in-Chief.	<i>Boys of '76</i> , Coffin, page 17.
Lexington and Concord, April 19, 1775.	Paul Revere—Christ's Church.	<i>Soldiers and Patriots</i> , page 42.
	William Dawes.	<i>The Minute Man of '75</i> , Reading Club, No. 3.
Bunker Hill, June 17, 1775.	Gage, Pitcairn, Davis.	<i>Fenno's Favorites</i> , No. 1, p. 32.
	Burning of Charlestown.	Frothingham's <i>Siege of Boston</i> .
	Spectators from Copp's Hill.	<i>Landmarks of Boston</i> , page 207.
	"Old Put," Col. Prescott, General Warren.	<i>Boys of '76</i> , page 42.
		<i>Fobes' Five-minute Readings</i> , p. 159.
		<i>Lionel Lincoln</i> , Cooper.

EXERCISES FOR LITTLE ONES.

BY CORA WOODWARD FOSTER.

ON Friday afternoon the little ones like a change in their work. A few simple exercises may be introduced that will be instructive as well as amusing. For exercise in spelling, give out words to be decapitated. at is, dictate a word; as, "glove." The children write s. Now tell them to erase the first letter and see if y can tell you the new word. Here is a list of some d words to work with: *Band, span, that, slate, spin, t, stick, glove, link, son*, etc.

Again, take a word like "cat." Behead it, leaving "at." Now form as many words as possible, by placing different letters before "at." Thus *bat, mat, hat, rat, fat*, etc., can be formed. Some few of the words to use in this way are, *band, late, bell, nest, man, love*, etc.

Another exercise that the children like is this: At a signal they put their heads on their desks. A word is given them, and as quickly as they can use that word in a sentence, heads are raised. A dozen or more should be allowed to tell their thought. One day I said, "Now, children, you may each think of some word and then look at me." I sent Alice to the board to write her word,

and then asked the class to tell me what it was, after which they spelled it together. Several others wrote their words in turn.

Cut colored paper into long strips, and distribute among the class for a number lesson. The numbers are placed on the board, and the work put on the paper by each child instead of on a slate, as usual. Those who have neat papers and obtain a perfect mark might be allowed to carry the papers home.

Tell the children to think of something to talk about. Now let one of them tell something about the object he has in mind, but he must be careful not to tell what it is. The rest of the little ones are given the privilege of guessing, and the one who gets the right answer can take his turn. Once in a while let the children play colors.

In ungraded schools, for a great part of the time the First Reader children must amuse themselves. There are many valuable ways for using some of this time. They can write, copy numbers, and draw designs. My scholars liked very much to trace pictures on tissue paper. I gave the pictures to the children if the tracing was correct.

When the slate has lost its charm, use the board and crayon. Chalk has a peculiar fascination for the child; perhaps because he is only occasionally allowed to use it.

THE USE OF STORY READING.

(As observed in Quincy, Mass.)

IN the lowest grammar grade the teacher read a story to the class, after which she selected from the story and placed upon the board these words:

company	solemn	report
beware	fate	ruffled
parrot	remember	finished
received	scratched	allowed
their	loaded	surprised

These were left there through the day. The next day the class must be prepared to give an oral sentence, using one of these words as the emphatic word of the sentence, at least with sufficient emphasis to make its distinctive meaning evident. Sentences are then to be written containing these words. The story, as read, is to be reproduced, using as many of these words as can be woven into the story naturally.

SCHOOLROOM DECORATIONS.

BY EMMA JONES.

IT is only within a few years that a "pretty schoolroom" was thought to be advisable. Ashes and rust will always give a stove a "sick look." On the north side was the teacher's desk; on the east the water-bucket, a rusty tin cup, and long rows of hooks filled with the cloaks and hats. The chief decoration during these years of the "reign of terror" was a good-sized bundle of "hickory

rods," or "birchen scepters." They were not used sparingly, either. The walls, originally a dingy white, were smoked till they laughed at the pale-faced stove. The windows were alike innocent of shades or blinds. The hot sun poured in unmolested, unless some girl pinned a shawl or paper up. How different now! That edifice has long ago been replaced by a handsome, commodious building. Each room is heated by furnace; there are also four large windows in each, with shades or blinds. The walls and ceilings are nicely papered, and on the former are hung pictures,—either chromos, nice wood cuts, or imitation steel engravings. Most of the teachers have, on their blackboards, a pretty border, landscape, animals, or flowers, drawn in white or colored chalk. To make the borders,—we will say a Grecian border,—draw six lines, each one inch apart, across the board. Divide this into inch square spaces, thus:



After the border is completed, carefully erase all unused marks. By making the same kind of lines a border of leaves or other designs may be easily made. For the pictures, if you cannot draw, buy the perforated stamping patterns. Any one can use these. Fill an eraser with chalk, place the pattern against the board and *hold firm*. Carefully strike the eraser against the pattern. Be sure to dust every perforation; then lift the pattern *straight* away. With a sharpened piece of crayon trace every outline. For ten cents you can buy a sheet of *tracing* paper (either black or white). Place this next to the board; lay on the tracing paper your picture (any kind will do); with a slate-pencil trace the outlines of the picture, bearing on the pencil, about as you would to write with an H lead pencil. This completed, take away the picture and tracing paper. With a crayon go all over the stamping. For these pictures wall paper has some excellent designs. To draw leaves of any kind, the real leaf may be placed on the board and the outlines traced with lead pencil. Then retrace with chalk.

Pot-plants are always pretty; but in some schools the fire is allowed to go out nights, and at least Friday evenings. Of course plants would freeze. A pretty and cheap plant may be had by planting a sweet-potato in a glass fruit-jar nearly full of water. Choose a sweet-potato which will fit the mouth, letting half be in the jar and half above. Set where the sun will shine on it. Every few days wash the jar and freshen the water. In about two weeks the white fibers and leaf-bud will begin to appear. Sometimes the vines will grow several yards in length. A sponge filled with flax-seed, wheat, or corn, and kept in a glass of water, will grow and be very pretty. Procure a five-cent goblet and a good-sized Irish potato.

Select one with plenty of *eyes*, and set *eye-end up*. If too small to fit the glass (in order to have plenty of long white roots the potato must not touch the bottom of the glass) three small sticks may be stuck into the bottom, thus raising it up. The roots will soon hide these. I had one last year which had five stalks, from three inches high to forty-three. Four stalks had blossoms, one stalk having, at one time, thirty-one. On two sides were little *nests* of *baby* potatoes, nine in all. It was really a beautiful plant; being grown in the house it did not have the coarse look of the field potato. Another novel plant is a hanging basket made of a turnip. Cut the top off within a half-inch of the turnip. Turn top down; cut away the root; clean out the inside, leaving the walls a half-inch thick. Fill this hollow with earth; plant cypress, madeira, smilax, or flax seeds. Fasten strings in two sides, and hang in a window. Soon the turnip leaves will begin to grow *down*, while the vines may be trained up. No growing thing will please little children more.

Children are much influenced by their surroundings. If they perceive that taste and order and beauty are the law of the room, they will be careful not to violate it. Generally a child will behave better in a neat, tastefully-furnished room than in a bare, dirty one. The influence is an unconscious one; it molds the character. How desirable, then, that the apartment in which children spend most of their time should have purity of air, cleanliness and beauty, as a means of education and development. Bare floors, bare walls, naked windows, and skeleton benches furnish little inspiration to pupils, and less to teachers. Yet, six hours out of the heart of the day must this mute companionship be endured. What can be done? The minds of parents and school committees must be educated on this subject until there is a regular allowance made for decorations. Meantime teachers will reap great benefit from more careful attention to their surroundings, —their own desk, the pupils' desks, the floor, and the dust. Keep bits of paper and other scraps picked up. Require hands and faces to be washed, heads to be combed, and muddy feet to be cleaned.

SECURING ATTENTION AND INTEREST.

BY E. H. RUST.

THE writer has several grades in her school. For more than a year past the older scholars have read, five minutes each day, a part of a story from *Aunt Jo's Scrap Bag*, *Bodley Stories*, stories in *Wide Awake*, etc. This practice gives a season of rest and enjoyment, besides helping to form a taste for good reading matter.

Five minutes each day we have a general exercise in mental arithmetic, such as counting forward and backward in concert by twos, threes, etc.; adding at first short columns, then long, giving results, then adding in concert,

to prove correctness of results; a long column at sight, in concert; again, a rapid exercise in the four processes, oral and silent. This works well in a country school, or one with two or three grades, especially if no mental arithmetic is provided, and is a general exercise which all enjoy. Quite a high degree of rapidity and accuracy, — future helps, — can be attained, even where scholars, at first, are slow and not practised in mental arithmetic. If teachers are troubled to secure attention of scholars after recess, try the mental arithmetic, which may be varied each day, after recess in forenoon, and five-minute story-reading after recess in afternoon. Insist on the attention, which, almost invariably, will be gained at once, however interesting the fun and games at recess. I have completely cured this source of trouble by these means.

One feature of our general exercises, on Fridays, is a "query box" for all kinds of questions (without too many dates), which will be understood by scholars between ten and fifteen years of age, and will be interesting to them. We have five a week. On one Friday we give the questions, which are copied in the blank books; the scholars find the answers, if they can, before the next Friday, when they copy the answers and five new questions. Each Friday we occupy five or ten minutes studying questions and answers. Scholars enjoy questioning each other, and the teacher rests. Our questions are of every variety, — history, geography, any interesting facts, etc. Many of the scholars propound these questions, and the queries and answers of a term make an entertaining and instructive feature for "last day exercises."

A help to make scholars enjoy letter-writing is to have a letter-box. I took a chalk-box, the cover of which was planed, and a hole made large enough for the letters to pass through. Above this opening I painted the word "Letter" in large, red letters; below, the word "Box." We keep the letter-box in full view all the time. Younger scholars look forward to the day when they send letters to classmates; the teacher is the postmistress, and corrects the letters. At a certain time the scholars get their letters, note the corrections, and pass them back to the original writer, who copies in a blank book. Thus children learn the forms and processes of letter-writing, see the errors of, at least, one besides their own; and the playing at "post-office" adds a zest which would else be wanting to the work.

RAPIDITY in map drawing is the fashionable thing just now. In Cleveland we have seen admirable maps of the British Isles placed upon the blackboard in four minutes, by an entire class. This seems, upon the surface, to be a great improvement upon the old time plan of occupying one or more recitations in doing it. We have seen three times as much time wasted in making wave lines to indicate the sea as is now taken to make an entire map.

METHODS FOR THE SCHOOLROOM.

EARLY LANGUAGE LESSONS.

(As observed in Washington, D. C.)

WASHINGTON has started some lines of language-work that are exceptionally promising. We give the theory upon which the work is based, the work itself, approximating the results desired as nearly as could be asked, more nearly than theories generally eventuate in fact.

For eight weeks the child is not supposed to see or write a word or figure. He is taught to see things, to observe closely, to compare objects, to note differences, and also to observe resemblances. There is no attempt to make him talk correctly, little effort to direct what he shall say, and none as to how he shall say it. In eight weeks he has acquired, or rather developed, an appetite for knowledge and the expression of it. He has learned to ask questions, to answer questions, and volunteer information. He has also learned to know objects by number; indeed, much of this early language work is with objects treated in number lessons. This work is systematic in its treatment of numbers, though primarily for language lessons, and is in reality play for the child.

As soon as the class gets well started in having something to say, and has the confidence to say it naturally and spiritedly, which is in about eight weeks, they are given words and figures. The "word method" is adopted, but not with the tediousness and "presumption of mental imbecility" which frequently characterizes this work. There is a presumption that the child knows what he wants to say, and the words and short sentences are given him because he wants them.

Mr. Marble's criticism is not only deserved, but eminently desirable in the cases in which a chart exercise halts for ten minutes to teach what a dog is, when every child is more familiar with the pet than the teacher who would shrink from the real fellow. It has no application, however, when the child is taught words after he has felt the need of them. Another important distinction is, that in this case the words are taught to accommodate themselves to what the child wants to say, whereas, in too many cases, the child is taught to want to say things that will accommodate the words he is taught. The one creates an appetite for written words, makes talking and reading natural; the other is inevitably stilted and unnatural. The modern methods have much to answer for of error in this regard, but the "modern methods with variations" promise to right these wrongs and give us a genuine improvement upon the old ways.

The rapidity with which children will learn words, idioms, and sentences for both reading and writing is astonishing, after eight weeks, conversation work. In three months' time these children will have read through,

with masterly skill, their First Reader, and will write a language exercise covering the whole side of the slate. At the end of eight months after entering school, or six months after beginning to learn to know and write words upon slate or chart, we found every class knowing and using between four and five hundred words, with many idioms.

Upon every subject about which they talked and read they made a "reading lesson" as good as that in the book, and in some regards the sentences of these little children were an improvement upon those of the printed page. Another element of this language-work is worthy of notice, though we fail to see in it any special merit, philosophically or experimentally, though the teachers seemed enthusiastic over it. The superintendent, with the aid of the teachers, has selected a thousand words, which he thinks the children will be likely to learn in the first year and a half of school life. These have been engraved in elegant though simple script and printed upon cards, which are afterward cut up into separate words. These thousand script words are given each child in a box, and as fast as he learns to recognize a word he hunts it up from among the thousand and transfers it to another box which contains only the words he knows. He can make the transfer of a word, even though he has not learned or studied the word in the class, care being taken that, before he makes the transfer he give the teacher evidence that he not only knows the word, but knows its use.

The supplementary reading is prepared for the First Reader children by the students of the Normal Training School. These young ladies, student-teachers, sketch a picture, make sentences upon it, or more generally take those which the children have made and make a page with the picture of about the size of their book page. They put four of these pages on one sheet the size of the hectograph, and then take twelve impressions, which gives enough of the four lessons for the class. Twelve copies are sufficient for a class to read from in supplementary reading. When we were there, six months after the class began to learn to read, there were one hundred sets of twelve each for supplementary reading in the First Reader.

We learned enough from our observation of language-work in Washington to convince us that we have but begun to discover how the child should learn the art of reading and writing.

HOW IT RAINS.

BY GUSSIE REINSTEIN,

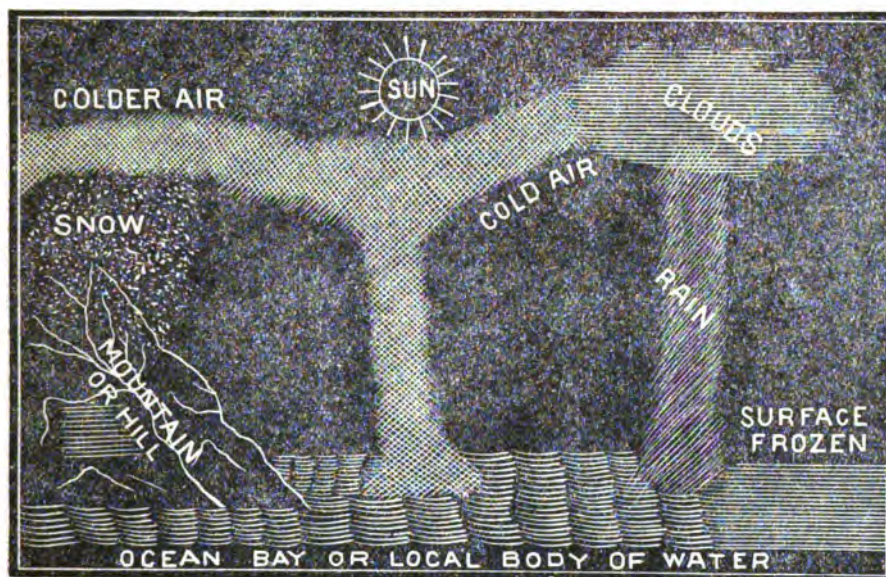
Lombard Street Primary School, San Francisco, Cal.

THE completed diagram below explains the reciprocal dependence of rain on the earth, and the earth's supply from atmospheric action. It is intended merely as a substratum from which the teacher imparted the information in her characteristic manner; it is, therefore, not

presented in dialogue, for the charm of conversation, especially with children, lies in its spontaneity, which can neither be anticipated nor reproduced in its original and oftentimes comical interest.

The wavy lines are drawn first, the thickness of the chalk producing the billowy effect excellently. The children may think them snakes or shavings, but from those trained on "hints" the word wave is soon offered. The sun, with his divergent beams, is rarely mistaken, though without his radii the circle may be thought to be the moon.

Col. Parker said: "In drawing objects to picture words



leave something to the imagination of the children." But the poorest artist will find no difficulty with this geographical demonstration.

The finer lines beneath Sol represent the evaporation. As a substitute, I presented this lesson in many primary grades, in every one of which some one was found who knew "the sun sucked up the water," it being a scientific fact whose difficulty is increased by the invisibility of the process renders their knowledge surprising. A convincing argument, however, is found in the practical illustration of passing over dampened ground in warm weather and the resultant cooling influence.

The elevated clouds (constituting fog at less distance) are intended as synonymous with a lower temperature, the evaporations rising to meet which forms the descending air; introduce here the condensation exemplified by holding a spoon or other metallic utensil over a steaming spout. Rain is thus shown as returning to its source, the earth.

The moisture raised from the water's surface, meeting a cooler temperature than that necessary to produce rain or hail, forms snow deposited on the lower earth or mountain-tops; the sun's heat melting this sends running in mountain streams, creeks, and rivers, to be finally reunited with "the dark and deep blue ocean."

GEOGRAPHY.—(VI.)*

BY CHARLES F. KING,
President National Saratoga School of Methods.

MAP READING.

VERY few teachers in this country base their instruction upon an intelligent use of the map. The pupils should be taught to read the map as one does a newspaper. A large part of the facts given in most so-called descriptive parts of geographical textbooks are clearly stated upon the map and do not need further expression. The pupil can be easily led to discover the important physical features of each country for himself. This will compel him to think while studying the map, and lead to self-activity, and independence of research. At first the teacher must assist the pupil both to see and to express these geographical facts. Suppose it is a class of the fifth year study, and map-reading has never been taken up as a special study, — then the teacher might lead them to see and talk in some such way as the following:

Hang up before the class
Guyot's large Physical Map,
Hughes's Political Map, and

a Map of the World. Let the pupils open their geographies to such maps as contain. Suppose the grand division is

AFRICA.

Teacher.—Look at the map of the world, class, and tell me where Africa is situated.

Pupil.—Africa is in the southern part of the Eastern Hemisphere, directly south of the Mediterranean Sea, and between the Indian and Atlantic Oceans.

T.—What important lines do you notice crossing it?

P.—The equator and tropics.

T.—What facts are suggested by these lines?

P.—They include a large part of the land in the country within the tropics,—more than is found in any other country. Hence Africa must be very hot and moist.

T.—Moist?

P.—Yes, it ought to be very moist, but I see on the political map that the northern part contains a great desert; this must be owing to local causes.

T.—You are right. We will learn about this at another time. Draw three lines, including the contour, and tell me its shape.

* Copyright, 1887.

P.—It is triangular, like North and South America.

T.—Look on the chart of Comparative Sizes and tell me how it compares with other countries in reference to size.

P.—It is larger than North America, and two thirds the size of Asia.

T.—What is the meaning of the colors on this physical map?

P.—The green indicates low lands, less than one thousand feet high; the buff, plateau regions; the white, very high mountains, usually covered with snow.

T.—When you examine a map like this, what do you learn?

P.—As the green is only on the edge, I learn that the lowlands in Africa are mainly around the edge, near the coast, while the interior is a vast plateau.

T.—What exceptions to this general rule?

P.—There is some low land around Lake Tchad and the banks of the Nile.

T.—Is the white color used?

P.—Yes; in Abyssinia and south of that country. This must be the highest land in the country.

T.—Look at the physical map of Europe and note any difference from Africa in the situation of the highlands and lowlands.

P.—In Europe the highlands are at one side, in the southeastern part of the country; and the lowlands are in the northeastern part. The latter cover more than half of the country.

T.—On the outline map draw a straight line from the Bight of Biafra to the middle of the Red Sea. Into what does this line divide Africa?

P.—Into two parts of about equal size.

T.—Are the two parts alike?

P.—No; the northern part is rectangular in shape, and the southern half is triangular.

T.—What other differences appear upon a close examination of the map?

P.—In the northern part I see that the chains run parallel with the parallels, or nearly east and west, as in Europe and Asia; in the southern half they run north and south. As there is more white and less green in the southern part, I judge the land is higher in the southern part, and hence that the plateau slopes toward the north.

T.—You are, in the main, right. The average height of the plateau in the northern part is fifteen hundred feet, and in the southern part three thousand feet. Where are the highest peaks?

P.—Just south of the equator, in the main axis.

T.—What do you notice on the map about the ranges of mountains in the south?

P.—They come together in Cape Colony, hence that country must be very mountainous.

T.—Notice the low land in that vicinity.

P.—It is not so wide as in other parts of the coast; for a considerable distance it disappears altogether, and

there the mountains must come down to the water's edge, as in the southwestern part of South America.

T.—What else can you conclude?

P.—That the slope is very abrupt.

T.—Do the mountains of Africa separate any countries?

P.—Yes; the Kong and Crystal Mountains separate Guinea from Soudan and Central Africa.

T.—But far more interesting than this is the separation by the Atlas Mountains of the northern part of the Barbary States from the southern or desert part. North of the mountains are found moisture, temperate breezes, vegetation in abundance, a desirable and healthy climate; south of the mountains, just the opposite. Where is the highest range of mountains?

P.—On the east, near the Indian Ocean.

T.—Where do you find the highest range of mountains in Asia?

P.—On the south side, near the Indian Ocean.

T.—Where in North and South America?

P.—On the west, nearest the Pacific.

T.—The largest mountains, remember, are nearest the largest ocean; the largest slopes nearest the smaller ocean. In what direction does water always flow?

P.—Down hill. The long rivers will flow down the long slopes.

T.—Into what oceans, then, must the large rivers flow?

P.—Into the Atlantic, because most of the land slopes toward the Atlantic or its counterpart, the Arctic; then, again, these rivers rise on the opposite side of the countries, between which ocean and high mountain barrier there is always abundance of rain.

T.—If a system of rivers consists of several flowing into the same body of water, find some systems in Africa.

P.—I find on the map the Atlantic system, Mediterranean and Indian systems.

T.—What plainly shows on the political map the slopes?

P.—The general direction of the rivers.

T.—Then trace, with the pointer, on this political map the continental water-shed.

P.—Beginning at Cape Blanco, the continental water-shed runs toward Lake Tchad, then northeasterly to Lake Tanyoniaika, passing round the eastern side of Lake Berua, it moves westward toward the Crystal Mountains, and then turns in a southeastern direction to the Kalahari Desert.

T.—In the southern part of Africa is the distance from the water-shed to the coast very long?

P.—No.

T.—Then how can there be any long rivers?

P.—Only by great curves, as in the case of the Congo and Niger.

T.—In what part of Africa is there a long distance from this line to the coast?

P.—From where it crosses the equator to the Isthmus of Suez.

T.—What do we find here?

P.—The longest river in Africa flowing almost directly north, called the Nile.

T.—What is noticeable about the northern part of Africa?

P.—The general absence of rivers; hence deserts. The Nile cuts the great desert into two parts, but it has no branches.

T.—Why not?

P.—Because a desert is on each side.

T.—What river of Africa is most readily navigated, and why?

P.—The Nile, because it flows over a gentle slope which is not crossed by mountains.

T.—What is true, as seen on the map, about the other rivers?

P.—They descend from elevated plateaus and make their way through ranges of mountains toward the sea. It is probable that they are not navigable, like the Nile, from the ocean, for there must be cascades not far from their mouths.

T.—Such is the fact. The Congo, for instance, is navigable from the Atlantic Ocean for one hundred and ten miles to Vivi. For the next fifty miles it is not navigable, owing to cascades. Between the parallel ranges of the Crystal Mountains it is navigable for eighty-eight miles, and then cascades interrupt navigation for eighty-five miles. In order to overcome these difficulties to commerce, a railroad is needed, two hundred miles long, through Guinea. How have these facts affected the history of the country?

P.—I suppose these mountains and non-commercial rivers have kept Africa closed to civilization, except about the Nile.

SENTENCE BUILDING.

(As observed in Quincy, Mass.)

UPON the board are written the following words:

emulate	martyr
sage	placid
precede	bard
patriots	cartoon
lichen	proceed

Each word is looked up in the dictionary carefully and its meaning studied, and all learned what the dictionary tells of its etymology, history, variety of uses, etc. There are four directions given for the use of these.

First: Write ten sentences, using one of these words in each, making a sentence in which the meaning of the word shall be distinguished, or that shall show that the writer must know its meaning.

Second: Write five sentences, using two of these words in each, exercising great care to have the meaning discriminated through the use. This combining two such words in one sentence is much more difficult for a child than would at first be supposed; but practice of this kind develops much skill.

Third: Write five sentences, using as many as possible of these words in each.

Fourth: Write a paragraph upon each word, saying all you can about its history, different uses, different forms, liability to misuse, etc.

It is often said of modern methods in language, that the tendency is to make it all play, using childish words, words about which they "knew it all" in advance. This exercise, and these words which we found upon the board, give a substantial answer, we think, to that criticism.

In another room in the same building, among the words upon the board for such an exercise was the word "minor," and one pupil wrote a sentence in which he used these expressions, but we neglected to take the sentence in its entirety, thinking we should remember it if we had the test portions, but we do not. It was similar to this, however; the italicized words we copied at the time: "It was a *minor event* for the *minor* to sing a *minor piece*." This was wholly developed from his study of the dictionary, and was not taken from or suggested by any textbook.

SEMI-PHONIC.

(A Cleveland Method.)

THOSE who object to the details and repetition in phonic work would find the modification used by Cleveland teachers more satisfactory, no doubt. The pupil is encouraged to sound as one so much of the word as he is sure of, sounding only such letter or letters as trouble him, and never sounding separately any letter unless he is uncertain about the word. In teaching, having *at* well learned phonically, it is never to be subdivided, and placing it upon the board many words are made from it, sounding only the first letter by itself and then the *at* as one. We know that this is now incorporated in primary school books, but some teachers whom we have met have failed to see the advantage in it over the full phonic method, and either accept or reject the system as a whole:

	<i>at</i>		<i>at</i>
m	<i>at</i>	h	<i>at</i>
b	<i>at</i>	f	<i>at</i>
c	<i>at</i>	p	<i>at</i>
r	<i>at</i>	s	<i>at</i>

"GOOD ORDER IN THE SCHOOLROOM."

BY HANNAH A. FOX, PENNSYLVANIA.

WHEN we teachers began our career as schoolma'ams, one common fear oppressed us. It made no difference how carefully we had prepared ourselves in book-knowledge, still we trembled lest we should fail in school government.

We knew of two mighty powers of control; the exercise of either, we believed, would insure good order in the schoolroom. The first was the power of fear. We had

read of monarchs whose every word was law because their subjects so feared their heavy hand. We had seen a woman alone in a cage with ferocious hyenas that were so completely under the control of her eye and whip that, though they snarled and growled at her feet, they dared do only her bidding.

So we were confident that an alert eye to see every misdemeanor, and a swift punishment following every such offence, would certainly insure an orderly school-room. But we felt that our disposition was not that of a despot. We considered corporal punishment lowering to both teacher and pupil, and we really could not endure the thought of being dreaded and hated by our pupils.

Therefore we firmly resolved that, as we were diametrically opposed to this form of government, we would turn to its opposite and rule by that other mighty power,—the power of love. Firm in our determination we commenced our work. Shall we ever forget our defeat? Oh, that from the memory there might be obliterated the mortification, chagrin, and despair of that experience! But no, those impressions, like many other sad ones, are indelibly marked on the mind:

"Time but the impression deeper makes,
As streams their channels deeper wear."

We thought one way of gaining the children's affections was by gratifying their trifling desires. The gratification of those little wants soon began to consume our time and theirs to a startling degree. The requests were simple, and we could see no reason for refusing, but chaos and confusion were fast taking the place of work and order. And now our questioners became so importunate that, like the wedding-guest in Coleridge's "Ancient Mariner," we could not choose but hear.

But what cut us to the quick was the fact that we were manifestly not gaining the love of our pupils. The saucy boy whom we reproved by a mournful glance seemed to consider us too spiritless to resent the insult he had offered us, and was fairly impudent the next day. Another, who had tormented us through the livelong hour with his pranks, when we gently told him of his faults, and expressed an earnest wish, as we dismissed him, that he would improve in his behavior, declared in stentorian tones, when he found himself outside under an open window, that he knew why he was not detained after school and punished. It was because *somebody* had invited the teacher to take a drive after school. Truly, all this was maddening. What was to be done? In the gloom and self-abasement that followed that bitter experience we at length perceived some truths that are still helps to us.

We saw that the love of a little child, even, was not to be bought for the trivial price which we had offered for it. It had also been clearly demonstrated to us that a child's judgment is not sufficiently developed for him to know what is best for his welfare. He is full of animal spirits, which lead him on to fun and mischief. These need to be directed till, from work, which ever brings with it a

satisfaction, he is conscious of pleasure and profit. And now it occurred to us that, although we had failed in securing the love of the children, it was still our duty to see that the work assigned to the school was performed. So, then, we turned to the good textbooks, filled from cover to cover with just the knowledge that our pupils needed to know. But to place those books in the children's hands and bid them learn their contents seemed like seating a company at a dinner-table spread with delicious but uncooked food. We began to make the lessons digestible and attractive. We had seen the delight that the fingers took in mischief, and now we endeavored to find them work that should be as charming. In short, we exerted ourselves to keep the children constantly busy with pleasant and varied employment.

"'Twas strange, 'twas passing strange," but we now succeeded in turning many from play to work, while they were scarcely cognizant of the fact. Of course there was necessarily much individual teaching; for there was the smart scholar who finished his task in half the time that was consumed by the generality of the class. If more employment were not provided for him, he soon found entertainment for himself, which was apt to be objectionable. So we planned extra work for him, or even allowed him puzzles or picture books. Then there was the dull pupil who stood ever ready to throw down his book in despair. The knowledge from which his classmates fed had to be cut up into smaller pieces before he was able to digest it.

Early and late we arranged the classwork in such ways as would keep the children constantly employed with pleasant and varied tasks. Timidly, at first, we asked, as we watched every child intently at work, "Is not this good order in the schoolroom?"

Persistently we continued in our endeavors to make each day's lessons attractive, till the end of the year. Then when the results were shown,—sure test of every enterprise,—with confidence we made this statement: "Good order exists in the schoolroom when every child is hard at work upon the legitimate school tasks."

CHART MAPS.

AMONG the many admirable things that Supt. O. T. Bright has done for Englewood, Ill., is the home production of chart-maps,—maps that are not published, and which if published would probably be too expensive for the average school to possess. The frame for the entire set of chart-maps, arithmetical charts and word-charts, costs but \$1.50, while the cloth for each chart costs but five cents. When one map is made, it is easy to trace enough for each building in the town. These maps are surprisingly complete. There are maps of the physical geography of each country; one of the state, with all the counties outlined; one with all ocean currents indicated; one of each grand division, with grazing lands,

various grains, mining regions, deserts, cotton, sugar, indicated. The work is so divided among the regular teachers, with the aid of pupils expert in such things, that the labor falling to any one is not burdensome, while the interest awakened in pupils and teachers is great.

A PRIMARY LANGUAGE LESSON.

[As observed in a Chicago school.]

THE teacher calls out Daniel and Blanche; and after a little time Joseph is called out with them, and the class, one after another, says something about them and their doings. They try to see how much they can say in the shortest way; then in the longest way; using pronouns carefully, and in other ways learning from variety of practice. We give a few of the sentences which they used promptly and with uniform accuracy. The class gave the closest attention:

The boy standing beside Blanche has somewhat lighter hair.

Daniel is a little taller than Blanche.

Joseph is the tallest of them all, and Blanche is the shortest.

If I could have either of the two slates I wished, I would take the smaller because it is the prettier.

If I could have one of the three slates, I would take the largest because it is the best.

You are sitting in a chair with a slate in your hand, upon which you are writing with a pencil.

The girl to whom you gave the pen-holder and pen has on a white collar.

You gave the rulers to Blanche and me.

You gave them to her and me.

She and I took the rulers from your hand.

A LANGUAGE LESSON ON BIRDS.

THE Cleveland schools exhibited some admirable language lessons, as we visited the rooms. Every teacher of language made the first requisite the having of something to say with interest and intelligence. Naturalness, ease, confidence were sought before technical accuracy. Our notebook has several pages upon what we saw and heard in a grammar school class in one of the lower grades. The subject was "Birds," though no such announcement was made and no preparation was had for it by the class. In the most informal way the teacher spoke of having seen a very beautiful bird in one of the trees on the way to school.

It would be difficult to tell when her talking ceased and the pupils began. From the first word every child was interested, and they began to ask questions.

Pupil.—Was it as large as a robin? *Teacher.*—Scarcely.

P.—Was it larger than a canary? *T.*—Yes.

P.—Was it red? *T.*—Not exactly.

P.—Was it black? *T.*—It had black spots.

P.—I guess it was yellow. *T.*—You guess about right.

P.—Did you see her nest? *T.*—I think so.

P.—Was it in a tree? *T.*—Yes.

P.—I guess it was way out on the end of the branches. *T.*—And I guess you know what the bird was.

P.—I don't know its name. I never saw but one. It built its nest in a willow tree, way out on the end of a branch. It had two branches, and got some strings and hung its nest between them, like a pocket-hammock, or a bag. I guess it was out there so the boys and the snakes and the large birds couldn't get at the eggs.

Another pupil.—I have seen such a nest as that, and the bird hopped along on the branch, and he jumped in out of sight so quick I could hardly believe he went in.

Another.—I saw a woodpecker one morning. Mother sent me over to Mrs. — after some milk, and as I was running along the path I heard a noise, and I stopped and looked up in the tree, and there was a bird standing on the trunk of the tree. I don't see how he could stand up that way, for the trunk was as straight up as a wall, and he seemed to brace himself with his tail to keep from tipping over, and then he would strike the tree with his bill so hard as to make a great noise. It was fun to see him.

T.—Well, how about your mother's milk? But we will not talk more about birds now; but you may all take your paper and pens and write anything you know about birds. Don't try to write what you don't know, but if you know anything about birds write it, and if you do not then you may write some things that you would like to know. See how many of you can tell the name of the yellow bird with black spots, that we have been talking about.

MAKE THEM THINK.

ONE of the greatest hindrances to success in school work is the lack of thought on the part of the pupils. They do not know whether they know what they know or not, and any tactics that will make them think are welcome. We saw a superintendent in a primary school one day, when he had asked a simple question which was answered at random, place this "example" upon the board:

2 boys,	}	How many heads have these?
3 geese,		How many tongues?
4 wagons,		How many legs?
2 ducks,		
3 bedsteads.		

We thought it trifling at first, but he made one of the best of school exercises out of it.

REQUIRE a little concert work for a minute, before a recitation, when anything is needed to bring the class into activity, discipline, enthusiasm.

PHYSICAL GEOGRAPHY.

Surface—Visible Portion of the Earth.

BY MARION T. KITTREDGE, FITCHBURG, MASS.

I. LEVEL SURFACE.

1. That parallel with still water.
2. How much perfectly level?
3. Why so little level surface?
 - a. Earthquakes and volcanoes.
 - b. Unequal contraction as the earth cools.
 - c. Tendency of water to seek a level.
 - d. Winds (sand), causing sand dunes.
 - e. Underlying rocks.
 - f. Waves and tides.
 - g. Ice.
 - h. Impossible in a rotating body.
 - i. Frost.
4. Effect if level.
 - a. Entirely level.
 1. Water 10,000 feet deep.
 2. No life except oceanic.
 - b. Partially level.
 1. Sterile or marshy soil.
 2. Storms, rain, wind, etc.
 3. Unhealthful climate.
 4. Uniformity in animal and plant life.

II. SLOPING SURFACE.

1. Makes an angle with still water.
2. Extent.
 - a. Reasons see above.
 - b. Proofs. Net-work of streams,
So little stagnant water.
 - c. Determined by
length and direction of rivers.
3. Importance.
 - a. Soil.
 1. Replenished.
 2. Protected.
 3. Drained.
 4. Variety.
 - b. Variety in
 1. Animals.
 2. Plants.
 - c. Water-power.
 1. Running water.
 2. Reservoirs, etc.
 - d. Beautify landscape.
 1. Mountains. (3).
 2. Hills. (2).
 3. Slopes, etc. (1).
4. Kinds.
 - a. Gradual slope. Use.
 1. 0° 10°.
 2. Strata slightly inclined.
 3. Depth of soil.
 4. Long rivers.

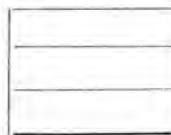
b. Abrupt. Use.

1. 30°, 90° (10°, 40° Ruskin).
2. Folded strata.
3. Ledgy.
4. Torrents.

The above outline may be used profitably with any pupil old enough to observe intelligently and to generalize. The teacher can give the subject to the class, and with their assistance (mostly) can prepare a similar scheme for their own work. This enables the pupils to arrange their ideas logically in their minds and to bring to their aid anything read upon the subject. It may also stimulate them to expand the outline much further, and the conversations of teacher and pupils be of mutual benefit. The several points should be made as clear as possible by means of sketches, molding clay, etc.

FRACTIONS.

IN teaching fractions objectively it is important to have much variety. In teaching thirds, for instance, it is well, before leaving them altogether, to use an apple, a strip of paper torn, a line upon the board, a square divided lengthwise, thus : and a circle, thus :



A SCHOOL LETTER-BOX.

BY "Q. N."

I SEE in my March TEACHER an article upon *letter-writing*, a subject in which I am very much interested just now; and trusting that the following may help some one, as it has me, I am prompted to write it. I have charge of a graded country school, and, with the help of another teacher, conduct the work of six grades, ranging from the highest primary to the high school.

I believe that letter-writing should be one of the earliest practical uses for a child's education, and have encouraged it in every way that I could think of, working sometimes in almost exactly the way advised by the writer of the already-mentioned article. The results were not what we hoped for, until I tacked upon the wall a crayon-box with slot in the cover for letters, and appointed a post-mistress to distribute the mail after school. Then letter-writing grew and flourished. We teachers have received letters from almost every child in school, which we correct and answer, usually getting a reply by the next mail.

We now have in process of making a fine letter-box, with a lock and key, to be permanently fastened upon the wall. On the end toward the school are to be the initials, P. O. With our improved condition we look for still greater improvement in our children's play-work.

LANGUAGE AND NUMBERS.

THE pupils make their own problems now-a-days for the sake of the language lesson and the appreciation of problems.

"5 times 2?" is all the teachers says, and each pupil thinks up a problem, and the teacher asks for several of them, of which these are samples:

John had 2 marbles and James had five times as many: how many had James?

Samuel bought 5 apples at 2 cents apiece: how much did he pay for them?

Mary, Susan, Lucy, Julia, and Sarah each had 2 gloves: how many had they all?

No scholar is allowed to have a problem of the same general character as any that has preceded it. Thus the variety and the language exercise are capital.

LETTER - WRITING.

IN one town, well supervised, every child, after the first year in the primary school, writes a real letter, to whomsoever he chooses; the teacher reads the letter, criticises it, and indicates corrections; the pupil rewrites it, and, after the teacher has again examined it places it in an envelope, seals, directs, and stamps it; the teacher sees that this is well done, and then the child sends it by mail to its destination. By a little care and a few directions the pupils are taught to write during their school course all kinds of letters,—friendly, social, descriptive, inquiring, business, applications for position, etc.

This real work is worth many times the mere mock-letter writing that is so often done. Envelopes cost less than paper; *i. e.*, it is easy to get good envelopes for less than the paper used in school costs; and it is worth much more for the child to direct a real envelope than it is to mark off the size of one on a piece of paper and write directions on that. A letter written for the purpose of sending through the mail is of much greater value in practice than a letter written as a play-letter or lesson-letter.

Whatever else the school does or does not do, it must teach the pupils how to write every kind of a letter in a correct, easy, business-like way. This power is of much greater consequence than the skill to write a good "copy" or a good examination paper.

"If you had as much money as there is in a bushel of 2-cent pieces, how many oranges could you buy at four cents apiece?" asked a teacher, and the answer came like a flash, "As many as there are two 2-cent pieces in the bushel."

We have seen the regular daily program upon the blackboard made highly attractive by the use of colored rayon for designing a frame of oak with flowers woven about it.

SAYINGS OF EXPERIENCED EDUCATORS.

— The educator of youth does not merely communicate so much instruction from year to year; he develops the receptive and acquisitive tendencies of mind which are afterward to play their parts in the intellectual activity of the nation.

— Be self-possessed. If you find that, from hearing a class recite, watching the order of the room, and giving individual attention to pupils, you are becoming confused, stop work for a moment until the fog clears away and you can act intelligently.

— The boy should have an education which, when completed, will make him better prepared to pursue the work for which he is fitted, and which makes him not afraid to do it, thus dignifying labor.

— If you are not getting the salary you think you deserve, or if you do not occupy the position which you know your talent deserves, do not slight your work and permit yourself to grow careless.

— Do not march pupils around the room in getting them to their seats from a recitation, when two or three steps will answer the purpose.

— Do not allow your school to become a public nuisance by insulting travelers, or by destroying fences or crops in the vicinity.

— Use several textbooks. Get the views of different authors as you advance. In that way you can plow a broader furrow.

— The student should first study what he needs most to know; the order of his needs should be the order of his work.

— Do not measure the ability of the duller pupils to comprehend a demonstration with that of the older or brighter ones.

— The teacher should avoid set phrases. They come to have no meaning for himself, and they hinder his pupils.

— Do not attach a specific penalty to a rule, but leave that for circumstances to determine.

— A teacher who neglects moral instruction fails essentially in one of the chief duties of the profession.

— Let your position of body in the schoolroom be dignified, but not stiff and formal.

— Teaching, to be successful, must be adapted to win attention.

— A vacillating policy is a sure index of a want of executive ability.

— Always be industrious in the schoolroom yourself.

THE AMERICAN TEACHER.

A. E. WINSHIP, } Editors.
W. E. SHELDON, }

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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NEVER allow a child to use a short pencil.

LIKE each child of your new class the first day.

Avoid being prejudiced against any new pupil.

ON no condition should you listen to a word of criticism of any pupil from his last teacher.

NEVER WRITE A WORD INCORRECTLY, is one of the mottoes that adorns the blackboards of the Cook County Normal School.

COLONEL PARKER encourages the youngest girls in his school to bring their dolls to school to sit beside them as they attend to school privileges.

Do not use up all the surplus vacation energy the first month. Husband it for future days; carry some of it over to the exhaustive spring days.

If you had a pupil last year with whom you could not get along, do not tell his new teacher of it. It is vicious, almost criminal, to prejudice the new teacher against him.

LEARN all you can from mothers. It is a mistake for a teacher to think "she knows it all," especially that she is so much wiser than mothers. A mother who brings up her children successfully learns many lessons by which the teacher may well profit.

IN the lower primary number work, where language lessons are combined with number teaching, some schools use quantities of little, square, rectangular, triangular, and circular cards, cubes, cylinders, and cones, teaching form as well as numbers and language.

WHATEVER is memorized must be so frequently repeated as to anchor it. Everything that has been learned should be called up at least once a year. The teacher should have a record of the things memorized, so that the can see that this is done.

SWEETS are for childhood, not for youth. Away with the affectionate sentiments, the *dilettante* manners, when you deal with boys from twelve to twenty. Let them feel that you think them manly, equal to hard work and good thought, and they will give it you.

YOUR class coming up from the lower grade was well taught last year, though you do not think so. It is as weak as it is foolish for you to say to your most confidential friend that you are surprised that they were not better taught; it is as base as it is impolitic to suggest such a thing before the class.

THE Play of the Blacksmith is fascinating for the upper primary children. We saw it in school recently. The teacher had taken the class of twenty-five to see a blacksmith shop in full running order, and they made up a play of their own, placing a small table or stand in the middle of the room, placed two old horseshoes thereon, and with two little hammers struck the horseshoes to time while all the others made the movement with the hands while they sang a little child-song with the requisite jingle in it.

WE were in the Douglas School, Chicago,—the fifth class,—when a committee of three from the class entered with six elegant, rare pot plants in full bloom. As they filed up in front of the teacher's desk the school applauded at the beauty of the bloom and the good taste of the committee. The amount of money raised was not large, and was all planned for by the pupils. The teacher says, "It is the greatest preventive of the vicious practice of candy buying." The effect of their public spirit adds greatly to the attractiveness of the schoolroom.

THE NEW CLASS.

IT is always a trying experience to take a new class. You never know just what the effect is to be upon yourself, your reputation, your future, when you start upon a year's work in a graded school with a new class. You estimate what the class ought to be by

what your last class was when you had had it a year. You think you do not, but you do just the same, unless you are a rare exception. You won that class by a year's acquaintance; you molded them to your ways by long and patient labor. When they left you in June they were a year older than when you started with them; they were striving for promotion; were anxious to please you. Everything was familiar to them in their surroundings, in your voice and manner. With this class it is different. They lack the age they will have next June; they loved their last teacher, and are merely curious about you; the room is new; their seating is different; many of the books are new; some subjects are new; your voice is strange. Remember all this and be patient with the children, patient with yourself.

THE NEW POSITION.

WE congratulate and commiserate you who have a new school. It is a good thing for your pocket, a good thing for your mind, a good thing for your influence, to get out of your old position through promotion, but it is a hard experience. It may look easy to the inexperienced, but no one can prophesy what your experience is to be. You may be thoroughly self-confident, but that may not save you many annoyances. Some of the pupils will like you, and some will not; some will think you cross, and others silly; some will think you speak too loud or too low; that you know too much or too little; that you care too much or too little for dress. You will be disappointed in, and deceived by, some of your pupils. You will underestimate some of the most worthy, and overestimate some worthless ones.

The secret of success is with you. You will make it pleasant or unpleasant for yourself, your pupils, and the community. Be not over-anxious; avoid all impatience; keep your own counsels; never speak all you think; let no unkind word escape your lips. Be particularly careful about what you say of the previous teacher. Do your own work in the best way and with the least anxiety. Wait three months before you form an opinion about the school, the previous teacher, the community, the committee, or the superintendent.

THE ART OF RECALLING.

WE do not memorize for the sake of having facts, figures, and words in the mind, but rather to have them there in such a way that they will present themselves with the least effort. The memory passes events in review, groups them in familiar landscapes, refusing any promise of recollection to a dissociated fact, to a homeless waif of knowledge that is not made at home in the mind, that has not a place in the landscape. The virtue of memory, then, is in recollection. This may be voluntary or involuntary. Whenever the mind is not actively employed it entertains itself with a panorama of

what it has previously known. Such is the natural elasticity of the mind, and so great is its enjoyment of its own treasures, that it recounts its wealth of memories with relish. Its resources are so linked with each other from the events of yesterday to the dim distant past that, when it is at rest and has abundant reserve, we can scarcely see, hear, or learn anything without involuntarily recalling a chain of instances in our past experiences. It is a great loss for any one to be always reading, talking, or thinking. It is an important part of our education to be idle in order to allow the mind to play with its resources, to practice the art of involuntary recollection. Steam-car or horse-car riding, or walking, is an admirable way to luxuriate in the easy recallings of the mind. Sit in the horse-car with no train of thought, with the exasperating newspaper squelched; look aimlessly at some passenger opposite for a few seconds, and the face, the eye, the form, the attitude, the clothes, the parcel in the hand, or some trifling incident, will inevitably recall something in memory. It comes of its own accord, and is a good mental exercise.

This teaches us that we should learn everything in such a way that it may be as easily recalled involuntarily as the useless things that have such a certainty of being remembered. The underlying thought in teaching or learning should be its recall when it is needed, its nearness to the surface, as it were, so that it will recall itself without much provocation. It would revolutionize some teaching to have this need appreciated. In this involuntary recollection, in this unguided coming of the things of the past, each incident follows its predecessor because when it occurred it was in some way, possibly in a mysterious way, linked to that which dissolved into it in memory.

We may also voluntarily recall an event, a fact, a face, a voice, a sentence, by energizing this involuntary process, by volitionizing it, if we may coin a word. Knowing what we wish to recall, we bring to mind everything in our past experience that would be liable to be associated with it until we recall it. With skill, patience, and will we may voluntarily recall almost anything we have known. Learn everything with a view to ease in willing it back into the mind. Train self and those whom we teach to couple all knowledge with the activities of life so as to reduce to the minimum the mental effort of recalling it by an effort of the will. When thus learned we want the time, must take the time, to recall the things we know. Every mind needs to know the luxury of being alone with memories, needs the bliss of meditation with undirected recollections giving buoyancy to the imagination, needs the discipline of directing the recollections in the marshaling of memories. Scholarship at its best can only be developed when to knowledge, and the memory thereof, is added skill in involuntary and voluntary recollection.

DISSECTION projection maps are the latest home-made production of the Cook County Normal.

FOR EXHIBITION DAY.

THE YEAR'S AUTOBIOGRAPHY.

(For twelve little girls)

BY MRS. J. S. LOWE.

January.—

My salutation gay
I bring on New Year's day;
With sharp and cutting blast
The earth is overcast;
The streams, in stilled repose,
Lie under drifting snows;
I leave ere Boreas quits his reign,
And rest till New Year comes again.

February.—

The briefest stay have I
As Winter speedeth by;
But each succeeding day
The sunbeams longer stay
To warm the earth so bare
For early flowers fair;
But breeze, cold the air doth fill,
And sternly lingers Winter's chill.

March.—

I loose the prisoned streams
With warm and glowing beams;
But restless is my mind,
And few the friends I find;
For when the warmth of May
Floats o'er the balmy day,
I fling rude blasts so sharp and chill
To gratify my changing will.

April.—

"I'm fickle," so they say;
In tears, or gladness gay,
I while away the hours
In sunshine or in showers,
And promise future joy
That comes without alloy;
The swelling buds, the songster's strain,
Announce that Spring has come again.

May.—

"O beauteous month of May!"
Admiring hosts all say.
I'm charmed with flattering smiles,
And strive by magic wiles
To decorate and dress
In robes of gorgeousness
The naked earth, the forests bare
With tints most beautiful and rare.

June.—

I bathe in sunshine bright,
And give the shortest night
In all the year, and more,—
From roses sweet I pour
The perfume rich and rare,
To fill the Summer air;
The bees glean meadows o'er and o'er,
Industriously their hives to store.

July.—

I ripen grain for food
To feed the multitude;
The wavy, heated air
Is stifling everywhere;
The thirsty cattle stand
In swampy meadow land,
And humming insect life around
With droning monotones abound.

August.—

I scourge the land with death;
I bring the poisonous breath
Of heated tropic lands
And burning eastern sands;
In crowded cities sow
The seeds of death and woe;

Great storms arise at my command
That hurl destruction o'er the land.

September.—

I speed the orb of day
To southern clime away;
I lengthen hours of rest,
And weary ones are blest
By soothing, cooling breeze
That whispers through the trees.
Thus far is joy; but ere I go,
Fierce equinoctial gales do blow.

October.—

In foliage rich and rare
I vie with Spring-time fair;
But only bloom hath Spring.
Whilst fruit, instead, I bring
To lavish with free hand
O'er all the happy land;
And so with generous thought and care
For Winter's needs I thus prepare.

November.—

I smite the ungarmed yield
Of garden, orchard, field;
My icy touch is seen
In glistening crystal sheen;
No flowers can withstand
My cold, relentless hand;
With vigorous, firm, unyielding grip,
The trees unsparingly I strip;
Yet give a respite ere I go
By Indian Summer's mellow glow.

December.—

The poor my coming fear
The most of all the year;
But for the rich and gay,
They welcome give away;
With me the Christmas-tide
Forever shall abide.
A solemn duty on me lies,
To watch and wait while the old year dies.

All (locked arms).—

Then harmoniously we bind
Each to each with spirit kind.
Winter's cold and Summer's sun
Needs must be, as seasons run
On their course. The life of Spring
Begets the death that Autumn brings.
Thus round and round will season roll
'Till Time folds up his mighty scroll.

THE COLORS, IN RHYME.

BY LIZZIE M. HADLEY.

Where does the earth its colors keep,
When winter comes and it lies asleep?
As soon as its snowy coverlids, gone,
A gay green gown it always puts on.

Does it have to learn lessons, like boys and girls,
As on through the air it dizzily whirls?
It knows all the colors, I'm sure, full well,
But how has it learned them? Can any one tell?

We all of us know, on its dress of green,
Red, yellow, and blue are first to be seen.
There's Jack comes first, and his face and head,
As it peeps from his pulpit, is always red.

Then cowslip and dandelion brave and bold
Are both of them always dressed in gold,
While in shady nooks, so good and true,
Is sweet little violet clad in blue.

And out in the orchard the colors have wings,
And each one sits on a bough and sings.

There's blue-bird, yellow-bird, and little
redbreast,
In primary colors they're always dressed.

While in many a bird, and flower, and tree
The other colors you'll often see.
In orange and black the oriole sings
On the elm-tree bough where his hammock
swings.

Where the reed-grass fringes his marshy bed
The purple iris lifts up her head,
And bending and swaying with every breeze,
Wherever we look, are tall, green trees.

Green grass makes a carpet for all our feet,
And green stems hold up each flower so
sweet;
So each shade, tint, and color comes troop-
ing along,—
The flowers with fragrance, the birds with
a song.

Now where do they come from we all want
to know,—
Are they hidden in winter, deep under the
snow,
Or carried by breezes way up in the air?
For after a shower we see them up there.

Yet wherever they come from or where'er
they go,
Whether up in the clouds, or down under
the snow,
We know that when spring time peeps in at
the door
To tell us that winter's cold reign is no
more,

And the riverr, unlocked by the sun's gold
key,
Go rushing along on their way to the sea,
Then as quick as if touched by some fairy's
wand
The colors are springing on every hand.

WHAT THE STREAM SAYS.

BY W. W. BAILEY, PROVIDENCE, R. I.

The little stream sings on its way to the sea,
"Thou gold-haired baby, come frolic
with me."

"I'll ripple, and babble, and whisper to
you
All tales of the forest that ever I knew."

"For passing through woodlands, and mead-
ow, and glen,
I surely must meet with queer things now
and then."

"Then come, my dear baby, and listen to
me,
Ere my stories are lost in the fathomless
sea."

BAD HABITS.

"How shall I a habit break?"
As you did that habit make.
As you gathered you must lose;
As you yielded, now refuse.
Thread by thread the strand we twist
Till they bind us neck and wrist;
Thread by thread the patient hand
Must untwine ere free we stand.
As we builded, stone by stone,
We must toil, unhelped, alone,
Till the wall is overthrown.

—John Boyle O'Reilly.

KING ALCOHOL.

BY CARRIE CLOSE, CAMBRIDGE, MASS.

FIRST PUPIL.—I have been reading lately about a very wicked king.

Second Pupil.—Have you? Where does he live? Not in the United States, of course?

Third Pupil.—Why not?

Second Pupil.—Because our country is a republic, and we have been told that a republic is governed by a president, chosen by the people.

First Pupil.—But he does live among us, and owns many slaves.

Fourth Pupil.—Slaves in the United States! How can that be? Have you not heard that, several years ago, Abraham Lincoln, the president, wrote a paper making all the slaves in our country free?

Fifth Pupil.—And my brother told me that the men of the North fought against the men of the South, and made them give up their slaves.

First Pupil.—Yet, some of these very Northern men are this king's slaves; for his name is—

Seven pupils in concert.—Let us tell you; for we each have a message from him.

Teacher.—Children, notice the first letter of the first word of each message.

First of the seven.—Aching hearts are given to my subjects.

Teacher.—What is the letter?

Class.—A. [The one who repeated the message takes this place in front of the class, holding a card with the letter "A" printed upon it. The letter is named by the class, and the card shown by the one who repeats the message, until the word "Alcohol" appears.]

Second of the seven.—Lost characters fill my kingdom.

Third of seven.—Cruel deeds are suggested by me.

Fourth Pupil.—Old clothes are worn by those who serve me.

Fifth Pupil.—Helpless children are abused for my sake.

Sixth Pupil.—One's home and family are neglected at my command.

Seventh Pupil.—Lives are made wretched, and still I am king.

Class.—Oh! King Alcohol!

Sixth Pupil.—I have been told his birthplace. Just think! it is in sugar in its natural state.

Seventh Pupil.—I do not understand that.

Sixth Pupil.—There is sugar in the juice of fruit. As soon as this juice begins to ferment in pops King Alcohol.

Eighth Pupil.—What do you mean by "ferment"?

Sixth Pupil.—I mean the bubbling that is made when the sugar is changing so as to let in King Alcohol, and also a gas called carbonic acid gas. The gas makes the bubbles, as it rushes through the juice, away from Alcohol, into the air.

Ninth Pupil.—Yes; some of our preserves were spoiled in that way. A little air crept into the bottles, and soon the juice began to bubble as if it were boiling, and mother said that it had fermented. I asked some one what that meant, and was told it was he bubbling made by alcohol.

Teacher.—This bubbling in apple juice makes—

Class.—Cider.

Teacher.—In grape juice—

Class.—Wine.

Teacher.—In the liquor brewed from grain—

Class.—Ale, porter, beer.

Pupil.—I have been told that he goes in these liquors to a land in a few seconds he swims in the blood to all parts of the body. He is called "Appetite." One cannot drink them without swallowing him.

Pupil.—Sometimes he is strong enough to make a man fall.

Pupil.—That is when he gets to the brain. Our education will do us but little good if Alcohol is allowed to enter the brain.

Pupil.—After a while the brain gets tired of struggling with him and the poor man becomes insane. Many men in our lunatic asylums are proofs of this.

Pupil.—He whips up the heart until, like an excited horse, it goes too rapidly for comfort or safety. A drunkard's swollen, red face shows this.

Pupil.—He poisons the blood until, after trying in vain to drive him out, it allows him to blotch the skin, weaken the muscles, and in fact, ruin all he touches.

Pupil.—He takes a man's pocketbook and helps himself to the contents.

Pupil.—He enters a happy home, and quickly drives out all the peace and comfort.

Pupil.—He makes a man quarrel with his best friends.

Pupil.—He leads one out of good employment into idleness and vice.

Pupil.—He leads the drinker out of respectable society into vulgarity and sometimes crime.

Class.—Oh! how we despise this wicked, wicked king! Let him keep his liquor, while we merrily sing,—

You can't catch us, though we're children small,
For we know you too well, King Alcohol.

WHO?

[We give the pseudonyms this month, and will give the real names next month.]

Boz.	Major Jack Downing.
Christopher North.	Marion Harland.
Chrystal Croftangry.	Mark Twain.
Lawrence Templeton.	Max Adeler.
Currer Bell.	M. Quad.
Edward Search.	Mrs. Partington.
Elia.	Old Bachelor.
George Eliot.	Orpheus C. Kerr.
George Fitzdoodle.	Paul Creyton.
Isaac Bickerstaff.	Penholder.
M. B. Drapier.	Peter Parley.
John Gillford.	Petroleum V. Nasby.
Junius (probably).	Private Miles O'Reilly.
Martinus Scriblerus.	Timothy Titcomb.
Mathew Bramble.	Agate.
Mrs. Margaret Caudle.	A. L. O. E. (A lady of Eng.)
Nestor.	Bret Ha'te.
Owen Meredith.	Carleton.
Parson Lot.	Danbury News Man.
Peter Plymley.	Diedrich Knickerbocker.
Philisides.	Fat Contributor.
Pisistratus Caxton.	Gath.
Pisistratus Brown.	Henry Castlemon.
Artemus Ward.	H. H. (Helen Hunt).
An American Girl Abroad.	Hugh Conway.
Boston Bard.	Jean Paul.
Brick Pomeroy.	Joaquin Miller.
Christopher Crowfield.	Joshua Coffin.
Geoffrey Crayon.	Lemuel Gulliver.
E. D. E. N.	Oliver Optic.
Edmund Kirk.	One of the Fools.
Eli Perkins.	Ouida.
Elizabeth Wetherell.	Poor Richard.
Fanny Fern.	Porte Crayon.
Frank Cooper.	Robinson Crusoe.
Gail Hamilton.	Rob Roy.
Grace Greenwood.	Sam Slick.
Haas Brietman.	Sophia May.
Ik Marvel.	Saxe Holme.
John Phoenix, Gentleman.	Tom Brown.
Josh Billings.	Buffalo Bill.

SELECTED GEMS OF THOUGHT.

The soul is the life of the body. Faith is the life of the soul.

The tissues of the life to be
We weave with colors all our own,
And in the field of destiny
We reap as we have sown.—Whittier.

Value the friendship of Him who stands by you in the storm ;
swarms of insects will surround you in the sunshine.

The heights that great men reached and kept
Were not attained by sudden flight ;
But they, whilst their companions slept,
Were toiling upward in the night.

It is the struggle, and not the attainment, that measures character.

The noblest lessons taught by life
To every great, heroic soul
Who seeks to conquer in the strife,
Is self-control.

Those men who try to do something and fail, are infinitely better
than those who try to do nothing and beautifully succeed.—Jenkin
Lloyd Jones.

Priceless Gem ! The pearl of Truth,
Brightest ornament of youth !
Seek to wear it in thy crown ;
Then if all the world should frown,
Thou hast won a glorious prize
That will guide thee to the skies.

Wisdom and truth, the offspring of the sky, are immortal ; while
cunning and deception, the meteors of the earth, after glittering a
moment, must pass away.—Robert Hall.

Unless we act in the living present,
There is naught that we can save ;
The future is not ours for labor,
Though our hearts be ever so brave.

When men work, they cackle. God, never ; nature, never.
The sun performs its projects silently, continuously, marvelously.
There is no sound in the air. This great globe, like Solomon's
temple, was built without the sound of the hammer. So are the
works of God in all the universe.—Henry Ward Beecher.

What is it to be wise ?
'Tis but to know how little can be known,
To see all others' faults, and feel our own. —Pope.

The chains of habit are generally too small to be felt till they are
too strong to be broken.—Johnson.

See, Winter comes to rule the varied year,
Sullen and sad, with all his rising train,—
Vapors and clouds and storms.

—James Thompson.

Almighty mind guides the universe. As to this earth, just in
proportion to the development and culture of man's intellect, he par-
ticipates in that guidance ; knowledge enables him to lay his hand
upon the great machinery which God has constructed, and to direct
its movements for its own benefit.—Horace Mann.

NOTES AND QUERIES.

ANSWERS TO QUERIES.

306. What was the "O Grab me Act" ?

The Embargo Act, forbidding American vessels to leave port,
was passed by Congress during Jefferson's second term. The ene-
mies of this act, spelling the name backward, termed it the "O
Grab me Act."

"C. G. K.," Inwood, Ia.

Credit to "C. N.," Livingstone, Mont.

307. In naming the empires of Europe, should the British em-
pire be included ?

Europe embraces four empires and two republics. The British
empire is separated from the others and should not be named in
naming the empires of Europe. The British empire contains two
great islands and extensive colonial possessions in other parts of the
world.

"A. B."

Credit to "C. G. K.," Inwood, Ia.

301. Solve by arithmetic : A cistern can be filled by two pipes,
A and B, in 4 minutes and 5 minutes respectively, and emptied by
C in $2\frac{1}{2}$ minutes. A is opened for two minutes, and then A and B
together for one minute more ; then C is also opened. The cistern
at this moment contained 361 gallons. When would it be full, and
how many gallons would have passed through A and B respectively ?

Solution.—A can fill $\frac{1}{4}$ in one minute, and B $\frac{1}{5}$; and C can empty
 $\frac{1}{2\frac{1}{2}} = \frac{2}{5}$ in one minute.

A runs three minutes before C starts, and B runs one minute.

A will, therefore, fill $\frac{3}{4}$ of the cistern in the three minutes.

B will fill $\frac{1}{5}$ of cistern in one minute before C starts.

A and B will fill $\frac{3}{4} + \frac{1}{5} = \frac{19}{20}$ before C starts, leaving $\frac{1}{20}$ to be
filled. When C starts $\frac{19}{20} = 361$ gallons are in the cistern, $\frac{1}{20} =$
 $36\frac{1}{2} = 19$ gallons $\times 20 =$ contents of the cistern = 380 gallons.

A fills $\frac{1}{4} \times 380$, in one minute = 95 gallons.

B fills $\frac{1}{5} \times 380$, in one minute = 76 gallons.

C empties $\frac{2}{5} \times 380$, in one minute = $158\frac{1}{2}$ gallons.

A and B gain on C in one minute $\frac{1}{4} + \frac{1}{5} - \frac{2}{5} = \frac{1}{20}$; but, to
fill the cistern, A and B must gain the $\frac{1}{20} = \frac{3}{20}$, which will require
 $\frac{3}{20} \div \frac{1}{20} = \frac{3}{1} = 3$ minutes after C starts.

Therefore, A runs $4\frac{1}{2}$ minutes $\times 95 = 427\frac{1}{2}$ gallons, and

B runs $2\frac{1}{2}$ minutes $\times 76 = 190$ gallons, and

but C empties $1\frac{1}{2}$ min. $\times 158\frac{1}{2}$ gals. = $237\frac{1}{2}$ run through A and B ;

Contents of cistern proved 380 gallons.

Z. RICHARDS, Washington, D. C.

QUERIES.

CROSS-WORD ENIGMA.

348. (1) In earnest, not in fun ; (2) in a hundred, not in one ;
(3) in fruit, not in pear ; (4) in china, not in ware ; (5) in arch,
not in bow ; (6) in knit, not in sew ; (7) in iron, not in steel ; (8)
in woe, not in weal ; (9) in new, not in old ; whole is worth mill-
ions of gold.

DOUBLE ACROSTIC.

349. (1) A bird ; (2) plowed ; (3) a girl's nickname ; (4) to
annoy ; (5) to embellish ; (6) unequalled ; (7) a month. Primals
and Finals read downwards ; each give the name of a statesman
prominent in the early history of our country.

METAGRAM.

350. Whole, I am a young girl ; change my head and I become
successively, declared, an invasion, did lay, recompensed, and a
small worm.

DIAMOND.

351. (1) A letter ; (2) a mild beverage ; (3) a learner ; (4) pre-
vailing among the people ; (5) heaped ; (6) a boy ; (7) a letter.

WHAT JOY TO BE A WILD BIRD.

Oh! what joy to be a wild bird,
 Always free from care;
 Tilting in the sunny meadow,
 Flitting through the air.
 All the flowers know and greet him
 With a graceful bow;
 All the green leaves whisper to him
 Secrets soft and low.

Now his dainty bill he's dipping
 In the running brook;
 Now the water he is sipping
 With an upward look
 Hark, a rustle, chirp, a flutter;
 See! he flies away;
 Now he's back again, a-swinging
 On a bending spray.

High above us he is circling
 Swiftly round and round,
 All the while his song is ringing,—
 What a joyous sound!
 Oh, what joy to be a wild bird,
 Always free from care;
 Tilting in the sunny meadows,
 Flitting through the air.

—Selected.

OPEN LETTERS TO A YOUNG TEACHER.

BY L. R. KLEMM, PH.D., HAMILTON, OHIO.

VII.—RAPIDITY IN RECITATION.

HAMILTON, O., August, 1887.

My Happy Young Friend:—Do not hesitate in giving utterance to a question like your last one. It is of more weight than it may seem to you. You ask, "Am I right in insisting upon the utmost swiftness in answering to the call for reciting?" I should say yes, if you expect the answer to be a recital; but I should emphatically say no, if the answer is not to consist of something which has been memorized.

You see, as to quickness in answering the teacher's questions, or (to use a more technical term) as to rapidity in conducting recitations, I hold a somewhat different opinion from that so frequently advocated in educational periodicals. This is said with due respect for the conviction of others and the arguments they present. Let us first ask, What is a recitation? It is, and, in the true sense of the word, can be nothing else than "a verbal repetition of something learned or committed to memory" (Webster). Now, then, I grant, willingly, that in a case where something is, or has been, learned by heart, this swiftness in answering the call for recital is proper, judicious, and profitable. It causes not only a skill in making use of these intellectual tools in an exact manner, but also assurance and self-reliance in the pupil.

But the next question will be, How far is this memorizing by rote to go? Or, what is to be learned by heart, so that it be "recited"? Why, multiplication tables and a few other things which are of insignificance in comparison with the vast amount of conversation between teacher and pupils which cannot be called, and should never be, a "reciting." A more advanced opinion is, that the results of teaching which will last beyond the school years are acquired in a different way: I mean by comprehending facts, turning them this way and that way, and by constantly applying them in different ways and forms. All this needs time, needs thought, or rather the act of thinking, and in some cases even a moment's investigation by means of the senses on the part of the pupils. Almost every good thought is produced slowly; it has to be stripped of all the many fetters that seem to keep it tied down, and that one, it needs must be dressed in good language, *négligé* not being missible.

Will not the tendency to brilliant, rapid recital lead us back to

the antiquated method of teaching, which had the enviable quality of not being a method at all? Will not this brilliant, rapid recital kill the thoroughness advocated by pedagogical classics, with which they showed us how to unfold, to unveil, to develop the mind? It may be stated, in order to strengthen the argument, that, as far as instruction goes, the mind is the principal thing, not grammar, reading, arithmetic, geography, botany, or physics, etc. The latter are means, not ends, of education; the ends are to strengthen the inborn powers of the children, of which memory is only one and by no means the most important.

Let the pupils forget the many details of these branches after they leave school, their minds will have grown, and if the many details which we would allow the pupil to forget are obtained in the right way, and not merely learned by the tongue, they will not be lost after all. Riches thrown into our lap will soon diminish and be squandered, but what we have earned by hard labor and saved under sacrifices, to that we cling, and it clings to us. A kind of teaching which resembles this hard labor, by which the child's wits are brought to work, will, as may safely be affirmed, admit of no such rapid "recital" as is so frequently advocated.

Nor are, in my opinion, the brilliant pupils (those who show off in a "recitation") the ones that make strong men and women. Nay, I am led to think that the apparently dull ones win the laurels over the former. Here is an example: I know a gentleman who would be considered a rather poor pupil, if he sat among school children, as far as this rapidity is concerned. Whatever he says, he says with hesitation, constantly weighing his sentiments; his words sometimes follow each other so slowly that he resembles the miser who turns the penny in his hand several times before he gives it away. But see how precise he is in his statements; see the absolute ruth in them; see the logic underlying them! That man is at deeper thinker than scores of others; he has a clearer insight into everything his mind ever approached; and, what is bearing upon the question under discussion, he has learned more, by grasping slowly, than a great many others who grasp quickly and forge quickly.

Are we not, in our tendency to rapidity in teaching, falling into the same fault that is attributed to the whole nation, fastness, superficiality? Have we not too much of that skimming reading, superficial thinking, and blind following of authority in this country? Are we not increasing it? Do not, my dear young lady, regard these questions as conclusive arguments, but take them for what they are meant; inquiries of a troubled mind, that wishes for deliverance from the painful sensation of hurrying open-eyed into danger.

It seems to me there is a physical danger in this rapidity of conversation, also (I am "at loggerheads" with the term recitation), in school. This danger consists in wearing out teachers and pupils. I know a vigorous, active, and in fact (to use a slang term), dashing teacher. Whenever I see her teach, I perceive that her nerves are so active that her fingertips seem ready to dance Fandango. May I not attribute the weariness and lassitude of the children to the fact that they are literally worn out when school is out? They cannot do work at home. Is not the absence of this mad rapidity the reason why pupils in Germany can be called upon to do a liberal share of their school work at home? I merely strew this in as a suggestion. May be I am wrong. And now a simile.

A schoolroom with a teacher who strives at, and obtains, rapidity in teaching, resembles a hothouse. Every plant in it is beautiful to look at; they all show off in dazzling colors of all kinds. If the children could remain in that schoolroom it would be a good thing for—the schoolroom.

But see the plants droop if you place them in another ground, in another air, in other surroundings. The brilliancy vanishes, the blossoms and leaves soon drop, and the real valuable parts of the plants, the stems and branches, the root and germ of life, are preserved; they possess what will keep the plant alive; they adapt themselves to the new surroundings; they go through the process of acclimatization. So with the pupils. What has become part of their very selves, what has taken root in their minds, and what has been slowly gathered by the memory after it went through the mill of reason, and comprehension that—but why picture a thing, which is self-evident and not disputed?

I remain yours, ever ready to serve, L. R. K.

THE KINDERGARTEN.

THE Kindergarten Exhibit at the National Association was one of the best features of the Exposition.

THE lady was heartily applauded at Chicago when who said, "Children have an intense respect for law and order, and they may be prepared in the kindergarten for the stricter rules of the school. *Children should sometimes be taught that they are to obey without a reason.*

PRESIDENT W. N. HAILMANN, of the Kindergarten Department, National Association, made a great success of his meeting. He had a crowd every time, and great enthusiasm. We give a few of his thoughts, thrown off gracefully:

The good kindergarten is the cheerful unfolding of the child's faculties.

Children and gods play, and we want to see to it that children hereafter play themselves into a noble manhood.

A good kindergarten is ethical and religious.

Froebel looked upon a human being as an idea of God.


The teacher should be led by the child.

Play is not contemptible.

There is too much paraphernalia in much of the modern kindergarten.

MISS KATE L. BROWN did great credit to the kindergarten fraternity by her address at the National Association in Chicago, July 13. She made a fervent, skillful plea for such modification of the kindergarten and the primary school methods that the former method can be applied in the latter. She would not have the kindergarten make any surrender, but she would have her work preparatory in such a sense that modified primary school methods may develop legitimately from her work. She would have the later months of the kindergarten assume those disciplinary ways and tendencies which shall make the simplified methods of the primary school natural.

SECOND GIFT.

 OF all the gifts the least can be accomplished, in a constructive sense, with the second, which consists of a wooden sphere, a connecting link between the first and its successor, a cube, contrast of the sphere and the cylinder, the link between the sphere and cube. This gift should really be used in the nursery; but few nurseries being so regulated that the little people therein enjoy any training through Froebel's gifts, it finds a place in all kindergartens. After the child has had experiences with the bright, soft balls of the first gift, the wooden sphere is placed in his hands and he recognizes the already known qualities of his round plaything as well as discovers new ones. Later, the presentation of the cube with its contrasting and, to the child, great variety of phases, brings about a great increase of the little one's activities, which are still furthered by the introduction of the cylinder,

whose qualities are readily recognized because of their semblance to what has preceded it.

There used, in years past, to be a dearth of exercises in connection with this first wooden gift; but latterly the old-time restraint has given place to a series of extremely interesting ways of utilizing such apparently unpromising material. There are now many little movement songs into which the "little ball, cube, and cylinder" have crept; there are, too, charming little talks on form and building, which are illustrated with these wooden objects in combination; besides, there are beautiful ways of making real the trades, songs, and games, and giving to them a living interest. One of these last lessons, which it is our purpose to set forth, we saw given in a free kindergarten some days since. During the early morning exercises the little folks had been drilled,—if the expression be permissible,—upon a new song, "The Miller," from Mrs. C. B. Hubbard's book. As the seats were being arranged a little later, the teacher in charge brought forth two large boxes, whose contents proved to be sets of the gift which forms the subject of this paper. Everything in readiness, each child was supplied with a sphere; at length with a cube, and still later with the cylinder. A sort of review talk was had upon each object in turn before the kindergarten suggested building a mill and playing miller. The idea was received with delight, and the manner of building, quickly decided upon, was thus: A hollow oblong was inclosed with the cubes as a foundation upon which, cube by cube, cylinder by cylinder, the superstructure rose to be capped by a chimney of cylinders. A very creditable mill it turned out to be, and a lively interest had been awakened and held throughout by conversation relative to the miller's duties and the power that caused the corn to turn into "golden meal." The mill completed, a direction was given to fasten a string,—provided at one end with half an eye such as ladies use to fasten clothing,—to the sphere, and then followed the prettiest part of the exercise, for at certain expressions relating to the movement of the wheel the children beautifully illustrated the sentiment of the song with the spheres. When "The Miller" had been sung, some one wished to sing "Round and Round," also taken from Mrs. Hubbard's collection. This song called out still a greater variety of movement with the spheres than did the first. It was surprising to see, and difficult to understand, how children of only four years of age could so skillfully twirl the spheres without losing their hold of the string, and so rhythmically imitate "the dripping, dropping, rolling wheel" by tapping upon the tables, holding the string firmly meanwhile.

We were really disappointed when the time came to take the gift away, and the little people, we are certain, would hardly have expressed as much delight as they did by the sunshine of their faces had a dull, analytical form in building lesson, unaccompanied either by music or motion, been just closing.

FROEBEL AND HIS SYSTEM.

BY FLORENCE CLAP, BALTIMORE.

FROEBEL'S educational theories are so completely the outgrowth of the boy's experience and the man's introspection, that an intelligent knowledge of his life and its development is indispensable to the correct understanding of many of his principles.

He was born in 1782, at Oberweisbach. His father, a parish pastor, was occupied with spiritual work and secular troubles. Froebel's mother died when he was an infant, and this loss was the first great cause of his thoughtful reflection about the relation of the child to the world about it; its needs, its trials, and the possibilities for good or evil that its education includes. His nature craved love and sympathy; his susceptibility to religious influences was marked, and his intellectual powers showed a keen interest in mathematical and scientific studies.

The first ten years of his life, lacking maternal tenderness, were a pain and grief to the child, but he comforted himself with nature, and, young as he was, wandering in the woods, gathering flowers, listening to the songs of birds, watching the flowing of the brook, studying the habits of animals, he was storing his mind with impressions which in the future he raised to the dignity of principles.

In his autobiographical letter to the Duke of Meiningen Froebel most touchingly relates with what a yearning heart he turned to his new mother. This affection was good-naturedly received and in a measure responded to, until her own child came to fill her heart. Then, with the dropping of the familiar and affectionate "thou," he felt an isolation that filled his soul with sorrow, and one gladly learns that in his happy relation with an older brother the child found some sympathy and wise counsel.

The intellectual and outward conditions of his home life were excellent. Much activity was displayed. His parents loved order, and delighted to beautify their surroundings; and with his father Froebel enjoyed working among fruits and flowers.

The experience of this boy, when at the age of ten he found himself among other children, is charmingly told by himself: "I was brought to school on a Monday. The appointed Scripture verse for the week was the well-known 'Seek first the kingdom of God.' I heard these words repeated every day in a quiet, earnest, somewhat ing-song, childish tone, now by one, now by the whole. Indeed this impression was so lively and deep that to-day very word lives freshly in my memory, with the peculiar accent with which it was spoken; and yet since that time nearly forty years have elapsed. Enough to say, my entrance into this school was for me the birth to a higher spiritual life."

The next realization that came to him was the limitations of the merely external. The perception of the contrast between inner and outer life thus became the key-note to his theories. The fundamental principles of his

educational methods was to arouse and strengthen man's personal interest in developing his own education.

While these convictions were slowly unfolding in the boy's mind, the external conditions of his life remained discordant. Misunderstood and neglected by father and mother, we turn with relief to the account of his brother's return home and his championship of this neglected child. His record at school at this time, in regard to scholarship, was not flattering. Indeed, he made scarcely any progress, and was continually under the ban of his father's disappointment and displeasure.

But it was brought about that Froebel was sent to an uncle, in whose house kindness and benevolence ruled. There his physical life was promoted, he enjoyed unusual out-of-door advantages, his opportunities for instruction were as good as the prevailing systems allowed, but the defects were keenly noted by the boy and bore their fruits later.

In his autobiographical letter he specially refers to the religious instruction he received, as it confirmed everything he had explained to himself. I emphasize this phase of his development as it clearly refutes the cruel charges of the dangerous tendencies of his philosophy which the Prussian Government made when it abolished kindergartens and gave Froebel his death blow. Speaking of his religious instructor, he writes: "The teaching sufficiently illuminated, animated, warmed, even inflamed me, to whom it was the thing desired, so that I was deeply affected, especially by the representation of the life, work, and character of Jesus."

Again referring to his confirmation, he writes: "I experienced in this the most effective and penetrating impression of my life; the threads of my being found their point of unity and rest at that time."

He now commenced his active life in the world. He was apprenticed to a Thuringian forester, and the life he led and the studies with which he supplemented it gave him an intimate knowledge of plant life. We next find him at Jena, hearing lectures on mathematics, mineralogy, botany, physics, on the care of forest trees, architecture, and surveying. After this time we find him engaged in surveying. Finally he decided his vocation was that of an educator, and in 1815 he went to Yverdun to study carefully Pestalozzi's theories and methods. But once more there is a break in his pursuits, although even in his army life he studied them as an intellectual problem, and it was during this time he met Langethal and Meddenorf, who afterward were associated with him in his kindergarten work. Next we read of him as engaged in mineralogical studies in Berlin, and it was here that the three friends, Froebel, Langethal, and Meddendorf, entered into the discussions that led to the establishment of kindergarten methods, and to a friendship that ended only with death. In 1817 he opened his school at Keilhaw. His wife, full of enthusiasm for the theories of education he advanced, left the social advantages of Berlin and devoted herself to uniting with Froebel in the realization of his ideal.

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VARIETIES.

- Carlyle was an egotist of the first water.
- Oscar Wilde is editing a paper in London.
- Stepniak, the celebrated Nihilist author, will visit the United States in September.
- Chicago has 42 female principals and 37 male principals in her schools, and 1,342 female assistants and 21 male.
- The original copy of "Gray's Elegy" was sold at auction for one hundred pounds.
- The first newspaper published in Virginia was issued on the 6th of August, at Williamsburg, and called *The Virginia Gazette*.
- Robert Louis Stevenson is coming to America in August or September. He purposes to cross the continent and pass a year or so in California and New Mexico.
- Mr. Edward Southworth has returned from his trip abroad with restored health, prepared to push vigorously the work which he is about to undertake at Glens Falls.
- John Britton, author of the *Beauties of England and Wales*, as well as of several valuable works on architecture, was born in a mud cabin in Wiltshire, and was for years a bar-tender.
- Spagnoletto furnished so perfect a picture of St. Bartholomew stripped to the muscles, that it became a valued study for anatomists, and from that time his fame was assured.

BRILLIANT Eleanor Kirk, who ranks among the best of newspaper correspondents in her line, thus writes the *News* from Brooklyn, in reference to certain fashions: The Worth manifesto in reference to unfashionableness of tapering waists is stirring things up at home and abroad. When it is no longer stylish to cramp the liver and paralyze the heart, and box-pleat the ribs, there may be a few more healthy women in the world. A fine figure is not to be despised, and it ought to be every woman's pride to make herself as attractive as possible. But Worth is right about plump waists. They are beautiful, and skinny waists are not. The popularity of

Ferris' Good Sense Corset abroad as well as at home, argues well for the evolution of women. These should be properly called common-sense waists, because they button in front and have firm shoulder-straps which take the weight from the hips, and are provided with different sets of buttons for the skirts. Their children's waists are models of durability and healthfulness. Every woman who has at heart the interests of the race ought to be willing to say a good word for its benefactors, and Ferris Bros., of New York, are benefactors indeed.

THE twentieth year of the New England Conservatory of Music, Boston, which has just drawn to a close, has been the most successful in the history of that phenomenally successful institution. Nearly 2,300 pupils have received instruction in its several schools of music, art, oratory, languages, literature, piano and organ tuning, physical culture, etc. Every State and Territory, and many other countries, have been represented in its halls. The ablest artists and teachers are in its faculty, and yearly additions are made from American and European sources.

A NOBLE WORK.

Henry S. Allen, Publisher, of New York City, has received from Queen Victoria, through the American minister at the Court of St. James, a communication in which Her Majesty expresses her acceptance, with "much pleasure and thanks," of a copy of "Mary, the Mother of Jesus and Queen of the House of David." Rev. Dr. Walsh, of Brooklyn, is the author of this work, and its acceptance by the Queen implies approval, since permission to make such presentation to her can be procured only after the work to be presented has been approved by Her Majesty's advisers. It is a great work, and deserves fully the great greeting it has received from the press and public throughout the land.

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NO a conscientious teacher,—and they who are not pursuing their work in this spirit are much fewer than many imagine,—this first week in the school year is a peculiarly trying one. A new class has come to us, but how well we know that before any real work can be done the class idea must melt away and each boy and girl must stand alone. A teacher, before she can be helpful, must have found out where her pupils are strong and where weak, and, what is more difficult, make sure that no child is concealing a real peculiarity of disposition by an assumed one, for sometimes sauciness or stubbornness hides a diffidence which is the key to difficulties.

In Miss Barton's school, Monday and Tuesday had slipped smoothly along, but on Wednesday morning as she scanned the upturned faces before her in the hush that preceded the devotional reading, she was conscious of knowing scarcely more of her pupils' real selves than she had learned from the faces.

The new room and teacher had brought about a restraint that in itself controlled the class. Surely it was not a set of rules that made the room quiet and the children orderly, for Miss Barton made no rules except this one, "Do Right." Even this was not given out as an edict from the desk; but hour by hour, as disagreeable traits made their appearance, by appealing to the best in the offender she hoped to lead each to make the most of *himself* and to see that his influence could injure no one. "Our influence has no nights and keeps no Sabbaths" was a motto in the room. If it never aided the children in self-government it often calmed and restrained the teacher.

Under a *régime* of "don'ts," she reasoned, does not the teacher govern and the child gain little in self-control? If the highest aim in teaching is character building, must there not be much freedom in the room in order that the children may make decisions for themselves? So yesterday, when Elsie had asked to leave the room, Miss Barton had said, "Certainly, you need never ask if you find it necessary." Was there a general exodus after that? No; partly because this was exactly as their former teacher had spoken. But suppose some one should abuse the privilege; a few quiet words when teacher and pupil were alone usually made the child feel somewhat as his teacher did in the matter.

Friday night had come, and five o'clock found Miss Barton resting? Yes. To be sure, the register into which she had just found time to copy the names, and the record for the week lay open before her, but, beyond it, her eyes wandered to the open window into which a tall, beautiful maple flashed its blaze of rich color. The beauty of the foliage rested her, still she was busily thinking of the oddities, peculiarities, faults; yes, and of the many good characteristics which had cropped out in the occupants of

the now empty seats during the week. A hearty "Good evening!" interrupted her. She turned to face Miss Whipple, the last year's teacher of some of these same little people. Why had she come? Miss Barton had now taught several years, but her friend had had a large and varied experience, and, because of it, when the younger teacher through her inexperience was making mistakes, especially in the discipline of her school, and reaping the bitter though inevitable results, she had kindly taken the tangled threads into her own hands and taught a common sense way of straightening them. So she had come to-night to add to the knowledge Miss Barton herself had obtained of her pupils all she could, not only concerning the children themselves, but their home life and environment.

During the hour that followed each of the thirty was discussed, some with only few words, while in speaking of others, "What can I do for them?" was a many-sided problem because school seemed to be about the only place where they could be under good influence.

As the two teachers walked for a part of the way home together, talking not about school now, but of those topics, which interest all intelligent women whether they be teachers or not, they did not notice a boy who had been leaning against the fence near where a street more shady and country-like led into their own, until he began to walk slowly toward them; then Miss Barton recognized one of her boys, and at the same instant her eyes fell upon a bunch of blue gentians which he was handing her with the query, "Ain't this the kind?" "Yes, John, fringed gentians. How lovely they are! I thank you,"—but the boy had gone.

By way of explanation Miss Barton said:

"This afternoon I varied the usual reading and language lessons, combining them in a Bryant exercise. So early in the term there could be but little preparation, so I brought in his life, having previously marked the interesting paragraphs. The children passed the book about, so each could have a chance to read. Then they looked in their new set of supplementary readers and found a poem by him, 'The Fringed Gentian,' after which they selected one of their number to read it for them.

"You remember that crimson curtain which can be drawn across a portion of the front board? Behind that I had written the names of a few of his poems. That was drawn away, and the titles were read in concert.

"I happened to have two copies of his 'Little People of the Snow,' which could be cut up into sections, dividing it among the members of the class. They had a little time for study, and then read the poem. I asked all who could give one item about the poet to stand, and all rose, even John.

"We decided to have the same fact given but once, and if any scholar found that his had been mentioned, he must be seated unless he could think of another. The facts were not given in order; so with one at the board to write


a list of topics, they agreed that if they were to write the story of his life they must speak first of his birthplace and parents, then of his boyhood, school, occupation, poems, and death. For a language lesson soon they will write it out.

"John said as little as any one, but he listened attentively; and as he passed out I noticed that he stopped at the desk to look more closely at the water-color sketch of a bunch of gentians I had brought in for the afternoon."

"John's best is not equal to Marion's or Willie's, and we must not forget that it is unjust to compare child with child, but the work of each pupil with that done before and with what he is capable of doing;" adding, as they took different streets, in that firm, low tone of approval which Miss Barton had rather hear than volumes of praise from a casual visitor, "You have lifted that boy, if but for a moment, to a higher level. Just so you can help to bring out the best in them all, if you can reach each. How you can do that no teacher, no book on pedagogy, can tell you. Ways will come to you through an intelligent, loving, sympathetic study of your children."

THE DELSARTE SYSTEM OF GYMNASTICS IN THE PUBLIC SCHOOLS.

BY SARAH L. ARNOLD.

 We have talked of the broad meaning of the word "Education," — the harmonious development of all the powers of the child, intellectual, moral, and physical, and have agreed that this full development is necessary to complete living. But have we not as teachers tacitly consented to attempt the training of the first two, leaving the physical culture largely to happen as it will? Have we realized that the growing intellect, the developing moral and spiritual natures need for a home a body recognized and cared for as the temple of God? Has the physical training in our schools taught our children to feel this truth?

These questions have been clamoring for an answer in my thought since a Friday, not long past, when I had the pleasure of witnessing some of the work done by Dr. Mary V. Lee, who has had charge of the classes in Physical Culture in the Oswego Normal and Training School. I was present at one of the class exercises in the large, well-fitted gymnasium in the Normal School Building. The sixty young ladies and gentlemen had had forty-five lessons during the school year.

When I entered the room the class were seated. You may go as you choose to your places on the floor," said Dr. Lee.

Singly and by twos, from the four sides of the room they came, some walking, some running, some skipping, all in polka step; all easily, with no sign of hurry,

awkwardness, or confusion, though the usual gymnastic signal of "One, two, three, begin," was wanting. In their places they followed their teacher through a long series of varied movements, gentle, rhythmic, graceful, in harmony with the soft music that accompanied them. Every muscle was stretched and relaxed, yet every movement was easy and natural; every motion showed a gentleness and grace that told of well-trained strength. They ran, they walked, they went to their seats in the "hippity hop" fashion that children love. They passed before Dr. Lee in line and gave her easy, courteous greeting. They made gestures of giving, receiving, throwing away; of fear and of gladness; of welcome and repulsion; and these needed no interpreter. In all was plainly seen the fact that somehow their physical selves had been so trained that they rendered willing obedience to the power dwelling within. They had learned to give expression to the higher nature, to do its bidding.

"But how?" I asked.

"By having every movement taught in harmony with law; by having graceful, rhythmic movements repeated before the pupils till they see the grace; by having these imitated till they feel the grace; by arousing noble feeling and then giving its natural gesture expression; by awakening noble feeling and calling for its expression, rejoicing if a dozen different gestures are given, each true to the sentiment; by shaking the stiff and awkward out of the body and substituting the easy and attractive; by making the body and soul free."

"But how will you do all this?" I pursued.

"I cannot tell you in five minutes. Come to my summer classes and I will show you."

"But is it possible for this teaching to be given in public schools?" I asked. "You shall see," was the reply. And I did see.

The primary classes from the Training School, directed by a pupil of Dr. Lee's, showed me that this system proves as great a success with the children as with the older pupils. They walked with ease and grace. They were proud of their growing chests and obedient muscles. They gathered for Dr. Lee imaginary flowers, growing on the gymnasium floor, with such truthfulness that the room seemed a real wood, and they among the flowers and ferns. Then with glad, graceful gestures of giving, and faces that spoke their feeling, they brought them to her. They held up their hands to catch imaginary apples which she tossed them; and they caught them, too. They lived the thing they acted, and their souls shone through their faces and spoke in every attitude.

Is not such physical training what our schools need? It will do away with the narrow chests, stooping shoulders, and awkward movements too common in our schoolrooms, and at the same time teach the children how their bodies may express, rather than stifle, the soul within them. And with such training the mind and soul will grow in harmony with their dwelling-place.

NUMBERS AT SIGHT.

SUPT. MORROW, of Allegheny, handled a class in the lowest grade of the primary school admirably in testing their knowledge of numbers at sight. There were little sticks upon the table, and he arranged them in various ways, thus:

1. |||| ||||
2. |||| ||||
3. |||| || ||||
4. |||| ||||
5. |||| |||| ||||

He multiplied these tests to make sure that they knew them at sight. He would have the class close their eyes every time while he arranged them, and then as they opened their eyes they would tell as nearly instantly as we could determine just the number. The phases of the exercise were the closing of the eyes, and the arrangement of the sticks, blocks, etc.

LESSONS IN CUTTING.

BY ABBIE M. WHITE, PROVIDENCE, R. I.

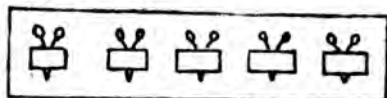
THE scissors asked for a month ago are now properly marked and ready for use.

How did we get them? In various ways. In the first place asked the children if they *wanted* to cut,—of course they did,—then we would furnish paper if they would bring scissors; this seemed a very satisfactory arrangement to both parties, till word came from mamma that she was afraid the little five-year-old would get injured carrying the scissors to school. We were on hand with paper, and armed against objections: Tell mamma to put a cork on the end of the scissors, or give you five cents and we will furnish you with a pair.

Some principals levied a tax of five cents on each child in the building (4, 6, or 8 rooms); they then invested the amount in fifteen-cent scissors (a little lower rate at wholesale), enough to supply the largest room. These are the property of the school, and do not require tagging. The class entering school next fall will be taxed at the same rate, which sum will defray the expense of sharpening. By this method no time is wasted in getting the scissors from home, none in reading the names for distribution, and no one is working with poor tools.

Other teachers had the children bring five cents,—the price of iron scissors; each room acts independently, and the scissors are the property of the pupils, but are not tagged. When the children bring scissors from home, all shapes and kinds may be expected. The best way to tag these is to write the name in ink on light colored leather, three

inches long. Cut a slit in one end, put the tag through the handle, and draw the end of the leather through the slit. Time, an important factor in school work, is gained if the scissors belonging to each row are kept by themselves, either in boxes, on card-board, or in bundles fastened with rubber bands. When distributed, they are kept on the right side of



the desk, ready for use. A piece of paper, 4 x 6 inches, is given each child, and is placed on the desk thus:

The pupils take the edge of the paper nearest them and turn it toward the teacher till it touches the edge nearest her. The edges are held together with the left hand, while the right presses the paper down on the fold. The thumb or finger-nail then presses the fold. We now have—

"A little book," is the answer of a delighted school.

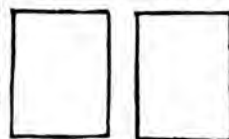
Is there a story in your book? No? I have a story in my book of a little boy and girl who went up the hill.

Up came the hands, and,—“I know that story, Miss ———.” Tell me the name of the boy and girl; what they were carrying. and where going. Can we make a bucket out of clay? To-

morrow we will try. There is now no lack of original composition, and our drawing lesson has now become one of language.

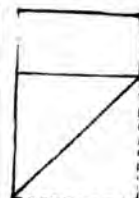
We will now turn our book over on the desk, thus, and think about the stories. We now have a tent, the roof of a house, a hen-coop, etc. We all heard the wind last night. This

morning we found the hen-coop blown down. We will some day make a new one, but now pass the finger-nail over the fold, so the paper will lie down flat. Cut it in two without doubling the paper. Children now place one piece on the desk in front of



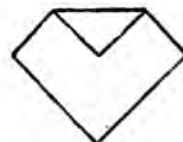
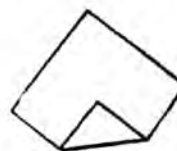
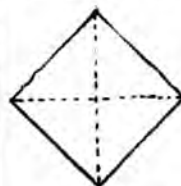
them. Let us see the pointer of the left hand (all raise left hand); place it on the lower left-hand angle of the paper; take the lower right-hand angle and turn

it toward the left till the lower edge touches the left-hand edge, and the lower left-hand angle is half as large as it was

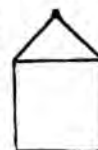
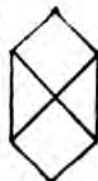


at first; take the paper in the left hand and cut along the edge, 1, 2, as you see me, and we shall have “a soldier’s hat,” “a shawl,” etc. Open the shawl and tell me the shape. “A square.” Place the square on the desk and fold the angle

nearest you over to the angle nearest me. Open the square as before, and fold the angle nearest you to the middle of the square, and we have “a ship,” which we will name,—Bessie, May-

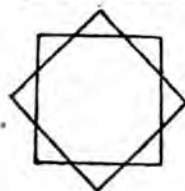


flower, etc. We can see the shadow of the ship in the water. Turn the angle nearest you to the middle of the square and we have a raft, a tug, etc., which we will turn thus, and have a broom case. The angle nearest the pupil is folded over to the center and a house made. The narrow slip of paper left after cutting the square is now folded and we have a letter, which, after reading, we put in—“The envelope.” With older children this lesson may be made a



very interesting one. The Mayflower is going to China, we will say, and we must send off the goods we make,—those that the people of China will want to buy. As the Mayflower is towed down the harbor by a tug, the house is one in which the goods were stored, and the letter is from the captain describing the passage to China, the delight of his children seeing the “ships of the Desert,” flying-fish, sharks, junks, sampans, customs and costumes of different nationalities, and ends by asking us to telegraph him (can we?) what to bring back. If the children do not seem familiar with all the passengers of the Mayflower have seen, suggest books of travel for home reading.

How can mucilage be used? and don't the children daub themselves and everything they touch? To the last question, No. We will take the paper remaining on the desk and fold the short edges together and cut in two as before. We make a square from each



piece, and put them together to make a star. The pupils then watch the teacher while she puts a little mucilage in the middle of one square, places the other square upon it, and holds till dry. They wish to do the same, so they hold one of the squares on the desk while the teacher passes up the aisles with bottle and brush, giving to each square a little mucilage, when the children proceed to place the second square on the first and hold them in place till dry, as they have seen the teacher do.

THE FOUR FUNDAMENTAL RULES IN THE 16TH CENTURY.

BY FRANK KARBAUM.

UP to the sixteenth century the Roman Notation was used in European countries almost exclusively. Then a change took place in Germany. The man that brought about this change was Adam Risen.

Adam Risen, generally called Risen von Staffelstein, on the supposition that he was born at Staffelstein, was born at Zwoenitz, Saxony. This place being in a mining district, his first vocation was that of a miner. Afterward, however, he took to mathematics, in the history of which his name has found a most honorable place. For it was he that introduced the Arabic Notation, as we have it to-day, based on the two principles that:

1. Ten units of any order in a number make one unit of the next higher order; and that,
2. When any order of units in a number is vacant, the place is filled with a cipher.

This alone would suffice to secure Risen a place in history; but he has done considerably more. He has written books on mathematics which were quite a means of diffusing mathematical knowledge. Among these, the one Risen published in the year 1525 at Erfurt, Germany, is of most interest to teachers, as it contains instructions pertaining to the teaching and learning of the four fundamental rules of arithmetic, by which he tries to do away with an “old way” of teaching these operations, and which are so original and unique, that they are well worth the time devoted to their study.

Before explaining his “method” let me state that Risen distinguished not four but six fundamental rules of arithmetic. Besides addition, subtraction, multiplication, and division he has what he terms “mediation and duplication,” the former of these meaning multiplication by 2, the latter division by 2.

The following is what might be called “Risen's method”:

Risen uses lines and spaces in teaching the four fundamental rules, partly as a means of demonstration, partly as an aid to the memory and partly as a means of performing the operations.

Regarding the merits of his “method” he says: “I have found

in my practice as a teacher that pupils taught by this method acquire skill in working with numbers far superior to that gained by pupils taught in the old way.” (The old way he refers to here is the one in use now, which, however, was, at the time, taught in that purely mechanical way that is best characterized by the following little anecdote: A teacher who asked one of his pupils: Why did you do it this way? received this reply: Because it gives the answer!)

As to the use of the lines and spaces Risen explains: “The first and lowest line means units; the one above it, tens; the next, hundreds; the next, thousands, etc.; the one above always having ten times the value of the one directly below. And every space equals one half the value of the line directly above that space.” Thus:

etc.
1000000
500000
100000
50000
10000
5000
1000
500
100
50
Tens.
Fives.
Units.

Instead of slate and pencil, the pupil required what was called a counting-board and a number of counting-pennies or buttons.

After finishing numeration the pupil had to learn that a button or penny on the lowest line stands for one; in the lowest space, for 5; on the second line, for 10; in the second space, for 50; on the third line, for 100; in the third space, for 500; on the fourth line, for 1000; in the fourth space, for 5000; etc.

Then practice in representing numbers on the counting-board set in, and finally the four rules were taught.

The rule Risen gives for addition is: “And note, that when on any line you get five buttons, pick them up and put one in the next space above; but when in any space you get two buttons, pick them up and put one on the next line above.”

Fig. 2 illustrates an example in addition.

Example: What is the sum of $761 + 8135 + 408$?

	I.	II.	III.	IV.
*10000				
5000		•		•
1000		• • •		• • • •
500	•			
100	• •	•	• • • •	• • •
50		•		
10	•	• • •		
5		•	•	
1	•		• • •	• • • •
* 761 + 8135 + 408 = 9304				

* These numbers, expressed in figures, were not on the counting-board. Pupils knew nothing of figures at that stage of school life.

Explanation: The parts were reduced to counting-buttons and arranged in columns, so that no line contained more than four and no space more than one. (See Fig. I., II., III.) Then the child found how many units there were by counting them. In this case 3 in III, 1 in I. = 4, to be put down on first line of IV. Next,

ible by 12, hence 50's space remains vacant. $5 \text{ } 50\text{'s} = 25 \text{ } 10\text{'s}$, plus $2 \text{ } 10\text{'s} = 27 \text{ } 10\text{'s}$, divided by 12 = $2 \text{ } 10\text{'s}$, with a remainder of 3 10's . 3 10's reduced = 6 5's , plus 1 $5 = 7 \text{ } 5\text{'s}$; not divisible by 12. Reduced = 35 1's , plus 11 = 36 1's , divided by 12 = 3 1's .

Quotient: 1 100 , 2 10's , 3 $1\text{'s} = 123$.

Considering the merits of Risen's method, I think that though it is for the greater part purely mechanical, yet it must be conceded that the analyzing and synthesizing of the numbers, which were required of the pupils, afforded a valuable means of mental training, and were, for the time, a very good preparatory course for the work with written numbers (which in Risen's book follows the work before described), teaching (1) Arabic Notation; (2) the four [six] fundamental rules with numbers expressed by figures.

Risen's method was used till about the year 1700, when it was crowded out of the schools by a book published by Peschek, who was born 1676.

Peschek's is the doubtful honor of reviving, by means of his book, that "go-as-you-are-started" way of teaching numbers which, for a number of years, was the *only one* used; which was *almost the only one* used even in Germany as late as 1800; and which is not quite obsolete yet.

To illustrate Peschek's "go-as-you-are-started" way, I now give an extract from his book.

"Example.—If a man gets \$25 on Monday and \$35 on Tuesday; how many dollars does he get both days?

Put it down like this:

25
35
60 dollars.

Explanation: Say: 5 and 5 are 10. Put down the 0 below the 5, and keep the 1. Then say, The 1 that was kept and 3 and 2 = 6. Put down below 3."

Happily, this dead weight of mechanism has been lifted off by Pestalozzi's imperative "Base all your instruction on intuition!" For, ever since the time of Pestalozzi good methods for teaching Arithmetic have been issued in Germany, among which the one of Güte, published 1842, has found its way to American teachers. And the last ten years especially have brought out most valuable handbooks for "Teaching Arithmetic." But, on studying all or more than one of them, one finds: 1. That "many ways lead to Rome"; and 2. That it is yet to be decided which is the best!

MAP DRAWING.

BY L. DE SENANCOUR.

NEW ENGLAND STATES.

I. Construction Lines.

Vermont and New Hampshire.

1. Draw a line to represent the 45th parallel of north latitude. 2. Lay off a portion of this line to represent the northern boundary of Vermont, plus the width of the northern part of New Hampshire. 3. Bisect this line, and one division will be the unit of measure for the rest of the map. It represents the width of the rectangle of Massachusetts, 50 miles. 4. From the end of the northern boundary of Vermont draw a line that will pass through the western part of Vermont, Massachusetts, and Connecticut. This line represents the 73d meridian. 5. Lay off the length of Vermont on this line ($3\frac{1}{2}$ times the measure). 6. Complete a rectangle, which is the general shape of Vermont and New Hampshire. 7. Place a point for the head of Lake Champlain ($\frac{1}{2}$ measure opposite the second point from the north, on the 73d meridian). 8. Extend the southern boundary of Vermont to the west ($\frac{1}{2}$ measure). 9. Extend the eastern boundary of New Hampshire to the north ($\frac{1}{2}$ measure).

Maine.

1. Lay off the width of Maine on the 45th parallel (4 times the measure). 2. Connect with the southern angle of New Hampshire. 3. From the middle of the 45th parallel in Maine raise a line equal to the longest line of New Hampshire. 4. Connect with the 45th parallel where New Hampshire is separated from Vermont ($\frac{1}{2}$ measure from the eastern boundary of New Hampshire). 5. Bisect this line. 6. Draw the eastern boundary line of Maine. (An indefinite line opposite the centre of the most eastern division of the 45th parallel in Maine.)

Massachusetts, Rhode Island, and Connecticut.

1. Complete a rectangle, which is the general shape of Massachusetts, (1 measure on the 73d meridian south from Vermont represents the width of the western part of Massachusetts, — 50 miles). 2. Extend the southern boundary of Massachusetts to the west ($\frac{1}{2}$ measure). 3. Place a point for Cape Ann, ($\frac{1}{4}$ measure east of the northeastern angle of Massachusetts). 4. Place a point for Boston Harbor. (Bisect the eastern side of the rectangle.) 5. Place a point for Cape Cod, (1 measure east of the southeastern angle of Massachusetts). 6. Place a point for the southeastern part of Rhode Island. ($\frac{3}{4}$ measure south of the southern angle of Massachusetts). 7. Place a point for the southwestern corner of Connecticut. (Place point on the 73d meridian, $1\frac{1}{4}$ measures below Massachusetts, and a point 1 measure west of it, which will be the one required.)

Partly erase for drawing map.

II. Outline of States.

Vermont and New Hampshire.

1. Draw Lake Champlain and describe it. 2. Draw the Richelieu River and describe it. 3. Complete the western boundary of Vermont. 4. Draw the boundary line between Vermont, New Hampshire, and Massachusetts. 5. Draw a line representing eighteen miles of sea-coast for New Hampshire. 6. Draw the Salmon Falls River, and describe it. 7. Complete the eastern boundary of New Hampshire. 8. Draw the northern boundary of New Hampshire, to the 45th parallel. 9. Draw the 45th parallel and describe it.

Maine.

1. Draw the northwestern boundary of Maine, which partly separates it from Canada. 2. Draw the St. John River, which forms the northern boundary of Maine, etc. 3. Draw the northeastern boundary of Maine, which separates it from New Brunswick. 4. Complete the eastern boundary of Maine to the Atlantic coast. 5. Draw Passamaquoddy Bay, Machias Bay, Frenchman's Bay, Penobscot Bay, mouth of Kennebec River, Casco Bay to coast of New Hampshire.

Massachusetts, Rhode Island, and Connecticut.

1. Passing the coast of New Hampshire draw Cape Ann, mouth of Merrimac River, Massachusetts Bay, Boston Harbor, Cape Cod Bay, Buzzard's Bay, Narragansett Bay, southern coast of Rhode Island, mouth of Connecticut River, mouth of Housatonic River, to southwestern corner of Connecticut, and continue the coast-line of Long Island Sound westward. 2. Complete the western boundary of Connecticut and Massachusetts. 3. Draw the boundary between Connecticut, Rhode Island, and Massachusetts. 4. Draw the boundary between Rhode Island, and Connecticut.

III. Surface.

1. Extreme southeastern part.
 2. North and west.
- Locate and describe principal mountains.

IV. Drainage.

1. Rivers belonging to St. Lawrence System.
2. " " " " Atlantic " "

Locate and describe principal rivers and lakes.

V. Islands.

1. North of Cape Cod.
2. South of Cape Cod.

Locate and describe principal islands.

VI. Characteristics of states, manufactures, etc.

VII. Capitals, largest cities, etc.

METHOD OF MAP DRAWING FOR THE NEW ENGLAND STATES.



I have arranged this simple method of map drawing for New England, and find it practicable, having tested it with a class averaging twelve years of age. The pupils conduct the lessons themselves, in the following manner: Having learned the topics in the order given, they dictate in turn while drawing in concert, correcting each other when a mistake is made. When a pupil has finished his recitation, others have the privilege of adding whatever they may have learned that has been omitted. In this way a very spirited recitation is carried on, that consumes less time than the old method of questions and answers, and more enthusiasm is awakened in the study of geography, as well as a more accurate knowledge of it gained.

EXERCISES FOR CONSONANT DRILL.

THE following note explains itself:

Last week I borrowed a little time from my own school work study the work of successful teachers, knowing that the gain to myself would be a gain to my school.

I was uniformly surprised at the good work done, but the one thing to which I wish to call the attention of your readers was an exercise in the Shurtleff School, South Boston, in the class doing fifth year's work. This class read so distinctly that I asked the teacher, Miss Folan, by what means she attained such results, for my experience and observation teach me that the greatest difficulty proper sounds. She said, "I find vocal drill indispensable, and while there are many helpful suggestions in books, I find that much of this work is too advanced for children and I'm obliged to make exercises to fit my class."

She then showed me various exercises, and the one for drill in consonants seems so well calculated to help children in overcoming one of the greatest defects in their pronunciation that I copied it for my own work, and feel sure she would be more than willing

is the inability of children in the public schools to give letters their that other teachers should have the benefit of it through your columns. In taking the drill many more words of each kind were used, and in each case the pupils pronounced the word ending in a consonant with great distinctness; they then gave the consonant slowly and clearly three times, pronouncing afterward a word beginning with that sound, to make sure that none misunderstood it. The results were in every way satisfactory.

Cambridge, June 16.

AGNES IOLA ROUNDS.

EXERCISE FOR CONSONANT DRILL.

hat—t—t—t—top	lag—g—g—g—gun
mat—t—t—t—tip	sag—g—g—g—game
sat—t—t—t—tap	rag—g—g—g—get
hack—k—k—k—cat	rub—b—b—b—bat
smack—k—k—k—kite	bub—b—b—b—bet
lack—k—k—k—caught	scrub—b—b—b—brush
lap—p—p—p—pan	lull—l—l—l—light
sap—p—p—p—pat	mull—l—l—l—lit
flap—p—p—p—peek	full—l—l—l—lamp
lad—d—d—d—dance	love—v—v—v—vat
had—d—d—d—done	shove—v—v—v—vau
mad—d—d—d—dip	
sun—n—n—n—nap	hush—sh—sh—sh—shop
fun—n—n—n—not	mesh—sh—sh—sh—shut
can—n—n—n—nip	bush—sh—sh—sh—ship
ruff—f—f—f—fight	lurch—ch—ch—ch—church
cuff—f—f—f—fit	much—ch—ch—ch—chat
muff—f—f—f—fun	such—ch—ch—ch—chin
roar—r—r—r—ripe	when
soar—r—r—r—run	what
more—r—r—r—rot	whether
some—m—m—m—mat	laugh—ing
come—m—m—m—met	play—ing
dumb—m—m—m—mam	chat—ting

LANGUAGE CHARTS.

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"I managed to get the exercise right."

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WITH SUPPLEMENT.

{ Old Series, Vol. XL., No. 2. }
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AMERICAN TEACHER.

VOL. XI.

Devoted to the Methods and Principles of Teaching.

No. 2.

A MESSAGE.

BY IDA M. GARDNER.

FAIR, pale moon, in the eastern sky,
I give thee a mission sweet:
To dear ones who dwell o'er the ocean blue,
Whose love is tender, whose hearts are true,
For me these words repeat.

O blest, indeed, were the sunny hours,
So gracious, so full, so fleet,
When your presence wove deeper the mystic spell,
Forevermore in my heart to dwell
In mem'ries rare and sweet.

But whisper, O moon, of a purer land
Where again our souls shall meet;
Where, beyond the dark river's rolling tide,
All human loves shall be glorified;
Shall stand in Him complete.

The pale, cold moon deigns no reply;
Serene and calm and still,
With no pitying throb for a sorrowful heart,
For all life's anguish, for all its smart,
Unmoved, she smileth still.

But oh, white moon, there's a God in heaven!
A God who can think and feel;
And through the dear loves which on earth he has given,
To teach us the joys, the delights of heaven,
He doth himself reveal.

You hid your face, O inconstant moon,
On that sad and dreary day,
When in gathering darkness and clouds and gloom,
In the Arimathean's rocky tomb,
In death the Savior lay.

Ah, you cannot know of that Love Divine,
Which in willing bondage lay!
But out of the depths of that Sacred Heart,
In a land where friends meet but never part,
Comes Love's resurrection day.

THE TWO ANGELS.

BY JAMES BUCKHAM.

DREAMED I saw two angels take their flight
From heaven's shining portal, hand in hand.
The name of one was Grief; the other, Night.
Earthward they winged their way, at God's command.

I saw, as they were floating through the sky,
The angel Night look back to heaven, and lo!
There came a star, that shone serene and high,
Bright as the golden sun and pure as snow.

"Yon star," said Night, "shall guide us back to heaven,
When God, our Father, summons us again."
Grief answered, "Sister, unto thee is given
To kindle stars; to me, the souls of men."

A PLEA FOR VARIETY.

BY CHARLES FISKE, NEW BRUNSWICK, N. J.

THE teacher is always thankful for any practical suggestions of methods for engaging the attention of her pupils. The lack of attention is the great obstacle that teachers have to fight against. It would be easy enough to make the pupils learn if we could but make them fix their attention on what they are studying. But that is the difficulty. The schoolboy, studying the most thrilling of histories, has an eye only for the picturesqueness of the war stories. The little fellow, poring over a principle of arithmetic, allows himself to wander off into a mental calculation of the number of marbles he will have by to-morrow if he keeps on winning from Johnnie, and prudently refrains from playing with Jimmie. It is difficult to interest the student in his work unless his heart is in it, unless his natural bent is inclined that way; and it is to be regretted, but must be said, that this is a happy state of affairs we seldom stumble against.

There has not been a lack of plans for fixing the attention of pupils; but the great difficulty has been that those who have invented these plans have made them so prominent and so striking (in order to impress the youthful mind), that they draw the student from the real study to this new element rather than fix his attention on that which is to be learned. A few suggestions to teachers may, therefore, be acceptable, and as these suggestions will be all in one line from one person they will necessarily be very few.

First, Do not be afraid to intermix different studies. If you have classes in several studies carry them along at the same pace in each, and introduce one study in the classroom when teaching another. For instance, you have a class in grammar, and the same class in history. The pupils are taught about a particular kind of sentence in the grammar class. Instead of having them concoct a meaningless sentence to illustrate the definition, have them pick a sentence from the history lesson of the day, if there is such a sentence there (and look it over yourself before you pretend to teach, to see whether or not it is there). Do not rely on the list of examples of various kinds of sentences given at the end of the textbook. You have a class in reading and the same class in literature. Instead of depending altogether on the reader, let the pupils read selections from their literature. It will impress what they read on their minds. If you are also

teaching another lesson, do not be afraid to let them read that, even if it is plain argument. We need for the future, men who can read forcibly, men who can read a plain statement so as to make it understood, and make it also interesting. If there are a number of teachers instructing the same class in different studies, let the teachers consult so that they may help each other in carrying out this plan for the intermixture of studies.

Second, Make your pupils appreciative. We will say that you have classes in English literature. They are studying Shakespeare. The man who wrote the textbook kindly placed at the end of the chapter on Shakespeare a whole batch of quotations from the poet's writings. If you ask your pupils for a quotation, you may rest assured that one of these will be given. If such is the case, ask the pupil giving the quotation what there is about the thought that strikes him, what makes it worth quoting. See that he understands it and appreciates it. But better, have him give selections not found in the textbook. Have him explain what he understands of the selection. I remember that query in "Romeo and Juliet," "Romeo, Romeo, wherefore art thou Romeo?" It precedes Juliet's now famous words, "A rose by any other name would smell as sweet." Well, when I was in school I never understood Juliet's question. I always had an idea that, Romeo having wandered off somewhere when he left her, Juliet was asking, "Romeo, Romeo, *where* art thou, Romeo?" And of course, I could not appreciate what came after, not understanding this. See that your pupils appreciate the selections they give.

This naturally brings me to another point: Do not confine the pupils to the words of the textbook. You have heard that before, haven't you? But I hope I can bring it to you more clearly, and show you how to avoid the evil mentioned. Let us revert to literature again. Although your pupils learn quotations, have them also give you the gist of a long selection in their own words. The words may not be well put, but you can tell whether the pupil really understands, and, besides, this will be excellent practice for him in framing his own thoughts in suitable language. Ask him which sentence of a long selection he thinks most striking, most musical, most beautiful, most true. Then when he has told you, ask him why he thinks so. Take one of the sentences yourself, and ask him what its characteristic is; ask him whether it is a notable or noticeable sentence. A still better idea is to have each of your pupils, before examination, draw a series of questions of their own on some study. See what they consider most important. Then let them answer the questions in each other's series. Or, sometimes, ask them to pick out the most important fact in the lesson. Then tell them which you think is most important, and why. By and by you will find that very often the pupils and the teacher agree, and the practice will help both.

Let us suppose you are teaching a class in the Consti-

tution of the United States. Do not let the pupils take everything for granted. Have each pupil know why this was inserted, and why it is so stated. Going back to the Declaration of Independence, it opens with the statement that all men are created free and equal. Ask the pupil, Is that so? It is not, and never was, taken literally. All men are not and never were, equal by birth. Then how do you qualify it, or rather, what is the meaning of it? Revert to the arithmetic again. We have a rule. What does it mean? State in your own words. Apply it to an example. Why is it true, and why will it hold good in every case? How can you prove it? Do you know any other rule of your own? If they do, try to show them an example that it fails to solve. But, always avoid asking a pupil for a rule. Rather let him perform some task, to do which he must know the rule. Then ask him why he did it thus; why not another way. Never let him take it for granted that a rule is true, and will "work." Never let him use the rule until he knows why he uses it, and has proved it to his satisfaction. You will be surprised to see how much he is interested in the proof.

I might mention other methods of fixing attention and exciting interest: Teaching book-keeping by forming firms and partnerships among the pupils; teaching geography by imagining the class off on a traveling tour; exciting the pupils to hunt up special subjects; having them write their compositions on subjects furnished by their lessons; and a hundred other ways. I might impress upon teachers the necessity of reading character, and on the strength of what is read fostering friendships between scholars, and starting them off to investigate subjects together. I might dwell on the importance of getting the parents interested in school work. Parents can do a good deal toward making their children like study. I might speak of the importance of small prizes. Why not have a pin to be worn by the student standing the best test on questions put by his fellows? Be sure that you have an honor roll where it will be seen. And last, I would urge teachers to cultivate friendly and close relations with their pupils. Some of these methods, and especially this last, may be difficult in large public schools, but at least they can be carried out to some extent, and I think, with a little effort, as a whole.

ONE of the most cheering signs of our times is the rapid growth of public sentiment in favor of popularizing the public libraries, as a means of general education and culture for the whole people. The reading of pleasant and useful books, by young and old, is one of the most stimulating means of uplifting the intellectual life of the community. Librarians and teachers should make a special effort to place in the hands of the young such books as are adapted to their wants. There are now in this country nearly 650 free public libraries, and their educational influence gives promise of large usefulness and great benefit to society.

THE POWER OF AN IDEAL.

BY KATE L. BROWN.

NOT long ago we visited the schoolroom of one past the meridian of life, who had given many years to her chosen profession. It was a charming company of children,—bright, arch, and innocently enthusiastic, each child seeming to work from sheer love of doing. But what impressed us most was the freshness and life of the teacher's presence. Blended with the serene calm of experience, and good judgment, was the intense earnestness, almost abandon, of extreme youth. After the exercises were over we sat talking for some moments in the now empty schoolroom.

"Dear Miss M——," we said, "what is the secret of your freshness and inspiration? You have taught, by your own confession, more than thirty-five years, yet you are brighter, calmer, and seemingly more unwearied than the girls just out from the training school. You have always worked hard; are a constant reader; are on the *qui vive* for new methods; and your face is never absent from conventions and teachers' meetings. You have home cares also, and society duties, and you are an active worker in the church and in charities. Yet you never seem tired or disheartened. How is it?"

Our friend smiled and blushed a little, seeming modestly inclined to waive so personal a question. Then, as we pressed the point, she said seriously:

"Well, if I have kept young and fresh in all my long service, it is because I have lived under the stimulating influence of a high ideal. My work has been no second thought with me; it has seemed the very noblest, grandest, sweetest thing I could conceive of doing. It has unfolded to me with all the fascination of a wondrous fairy tale. When I am working with the children, I have something of the excitement that a noted actor must have when losing himself in his parts. It isn't drudgery to me, unless I forget this ideal and begin to think of my own selfish interests. When I realize that I am working with God, and that even my poor human efforts are hastening the Divine Plan, I am so happy I could sing for very joy. I feel like a priestess before the altar of the Most High.

"Oh yes, I get tired and things go wrong at times, but it is always in myself. When I review the matter it doesn't take long to see that the jar occurred because I had dropped my ideal and turned my gaze upon lower things."

"But," we ventured, "can one always be on the heights?"

"No, she cannot," was the frank reply; "and yet I do most firmly believe that these things lie more fully within our control than we are ready to acknowledge. We have to learn by experience. The young heart frets itself sadly thinking of the obstacles that lie in the path toward success. A little more of living will teach those things to learn that God has given power to either avoid

or overcome most of these obstacles. The secret of success lies within one's self. We can if we will. Oh! how I wish I could say this to all the discouraged, the doubting, and the weary. How I wish I could chastise with it, as with a whip of small cords, the lazy and indifferent."

"Do you not think health has something to do with it?"

"A great deal. A sickly body too often means a sick and morbid mind. I have kept my body strong by good care. Common sense must always be the foundation of every ideal. But I have found that my body, true servant of the soul, has been continually aided and strengthened by my ideal. If people could only realize how much true health comes in the wake of noble thoughts and high ambitions!

"Yes, if I were a preacher or an orator, my word to all workers should be, Cherish a high and noble ideal if you covet health of body and soul; if you aspire to usefulness and real happiness."

And does it need preacher or orator to give this message? Do not its words ring true even from the lips of a plain, obscure woman? What do we need more than the presence of such ideals?

There is an accepted respectability in many of the occupations of life,—in religion and in teaching as well,—a "let well enough alone" that is utterly deadening to any high achievement. And it is because our young people are born and reared in such an atmosphere that they weary and sicken; that all becomes "stale, unprofitable, and flat." It is the secret of more than half of the failures; it is at the bottom of the drudgery. And how many weary workers stifle in the damps and mists of the lowlands, when there is room for all on the sunny heights!

Religion,—or its more common name, life,—should be fearless, reverent, splendid, heroic. All phases of thought that rob life of one of these elements are so many snares born of our own weakness, self-will, and spiritual obtuseness. God has not meant that even the commonest of his works should ever be degrading. As George Herbert has it,

"Who sweeps a room as for thy laws,
Makes that and the action fine."

So the teacher is indeed a high priestess, standing ever at an altar whose incense-breath should be praise, aspiration, and joyful striving. Let it mean a dull round of lesson-hearing and getting, of school begun with a sigh and ended with relief, and into what wastes of dull weariness and disgust may not the work lead?—the desert places of a soul not at one with God or its own higher needs. If on the other hand she be a priestess fired with the living fire from the Eternal Altar of God, what glories open before her wistful gaze! A new heaven and a new earth are here. Not one little flower blooms or one humble bird twits its song on the wayside spray, but the divine message comes more clearly. It speaks to her in the eyes of childhood and in the pressure of little hands. It is daily revealed in the unfolding mind and heart.

The companionship of great minds may be hers, and not one wise or loving deed is done the world over but she may share in the sweetness and beauty of it. And friendship will come, too, seeking its own, as the sweetest flowers attract their lover bees. There is bread and to spare at God's full table. Shall his children be content with the husks?

THE MEMORY.

BY A. E. WINSHIP.

MATERIALS FOR THE MEMORY.—Memory has to deal with something besides *words*. True it has to deal with them, and we naturally exercise the mind upon them, and the average thought is that when we speak of memorizing we mean the verbal exercise. That is but one of several phases of its activity. We must memorize *individual things*. We must acquire the skill to see a thing by itself, and be able to see it in memory precisely as it is. This is a more important acquisition of the memory than the verbal form. We must gain the power to see a thing in all its relations, the whole in all its parts, and each part in its relation to the whole and all its parts; the power to see a thing in its history, consequences, and probabilities. The teacher who allows a child to memorize a geography lesson in words merely because the words are so much better than the child's own words has little appreciation of what the memory is to do for the child.

We must memorize *facts in the abstract*. It is vicious to train the mind to depend upon a sight of a thing, or a representation of it in order to remember it. That were needless lumber for the mind. Most of that with which the mind is to be stored is abstract knowledge, *facts, truths, ideas*, dissociated with objects. It is this phase of memory that is highest, and is at the same time the most difficult to secure.

FIGURES are to be memorized sometimes, but unless one has a special tendency toward this kind of memorizing it is practically useless to waste energy over it. Figures are the least liable to take root in such a way as to make one absolutely sure of them. W. H. Moore of Hartford, Conn., is a genius with figures in memory, and we have seen an audience laugh as at a play to hear him give to the minutest figure the populations, past, present, and future, of nearly every state in the Union, with half a dozen variations to emphasize different truths, and he did it, not for exhibition, but as a portion of an address, and he could memorize them almost as easily as to read them. There are a variety of tricks by which to remember figures, but most of them make it several times harder than to remember them by simple effort of the mind. Fortunately there are few figures that one needs to know permanently.

NAMES.—Some find it exceedingly difficult to remember names, especially the initials of names. Not to be able to do this is quite an annoyance, and teachers should

early train children in name memory. Some children go through school and never know the name and initials of half their class. A boy's name is George P. Gregg. The teacher calls him Gregg, and if she writes his name it is merely George Gregg, and he comes to write it thus himself. It is all to save a little time, and when, as a man, he can never tell any one's name and be sure of it, he thinks it is natural inability. Acquired *inability* to remember names is one of the modern arts. Every child should be taught from the first to know the full name of every classmate, prominent man, etc.

VERBAL MEMORY.—The average test of the memory is with words, and this is as it should be. Not that it is the most important, but it is the most definite, and the results can be most accurately known, and well trained in childhood almost any one can acquire reasonable facility in verbal memory; indeed, it is almost second nature to the child from six to ten years of age to remember rhythmic phrases. The mind should be stored with memory gems, but they should be classified for character effect. Rightly used, memory and recollection have a positive influence upon character as well as upon the intellect.

Words symbolize ideas, and well-chosen words convey ideas that easily become loyal residents of the mind. The teacher, therefore, is to offer facts to the mind in such language that after the fact is understood, the words shall naturally abide there. The power to remember words is not the highest art. Many have the power of verbal memory who have no great mental ability. It is one of the early phases of memory, and is to be employed to advantage from seven to twelve. It is as vicious to discredit the service of verbal memory as it is to overestimate it. He is as much of a crank who thinks it a waste of time to cultivate verbal memory as he who thinks a child well taught who can recite words indefinitely.

THE HAPPIEST MOMENT OF A TEACHER'S LIFE.

BY I. M. GARDNER.

“**W**HAT do you consider the happiest moment of a teacher's life?”

A teacher had applied for a position in a certain school. She was a lady, in dress, speech, and manner. Her knowledge of books was extensive. Her success in governing was unquestioned. Her classes always passed creditably their examinations. She was a Christian and a church member. Her literary tastes and ideals were exceptionally high. Yet an indefinable something was wanting.

At length to draw out more of the inner life, the above question was asked. “The happiest moment?” and the fine, intellectual face grew intent and absorbed as its owner swept with a keen eye over the field of a teacher's life.

“Well, I should say that at least one happy moment was when my classes have passed successfully a public

examination, Another is when I feel that I have taught a difficult subject well and have made the class understand and grasp it thoroughly."

"Yes, these are happy moments, but not the happiest!"

The mystery was solved. That teacher, good Christian girl as she was, was wholly intellectual in her school-work. Her children's souls were not half so real to her as their intellects, and so she was developing heads, but leaving the half-starved hearts unsatisfied, undeveloped. Yet she was doing for others *just what her teachers had done for her!*

Think of this, fellow-teachers. The work which you are doing now with your pupils will be perpetuated and repeated again and again through future years. Is it worth repeating? What is your happiest moment? Did you ever have a pupil with whom you seemed to labor in vain, perhaps for years? Some day an awakening comes. The germ that has lain dormant so long springs up into life, and a growth which fills you with astonishment at its rapidity goes on under your very eyes. Some day you express your joy, and that pupil looks up at you with quickly springing tears and replies, "I owe it all to you!" Does not such an experience send us to the Master's feet? In glad humility to hear His, "Well done!" What moment *can* be happier?

OPEN LETTERS TO A YOUNG TEACHER.

BY L. R. KLEMM, PH. D., HAMILTON, OHIO.

VIII.—WHY SHOULD I TAKE THE TROUBLE?

HAMILTON, O., September, 1887.

My Dear Young Friend:—As our correspondence continues I notice with regret that you are not so convinced of the importance of our profession as it would seem desirable. Permit me, therefore, to answer your last letter by a few serious words. You ask me why you should study things which you are never expected to teach. I am afraid that this question betrays a spirit which I am bound to combat.

It is an undeniable fact, that upon all domains of practical life, as well as in science, *division of labor* has become a necessity. And no one will deny that to this division of efforts may be traced back many grand performances of our times. But we are also aware that the mechanic often sinks to the level of the machine, and becomes a mere mechanical worker, in consequence of this division of labor. And so there is imminent danger that in the realm of thought and mental labor those who are chiefly occupied with subordinate specialties will lose their comprehension of the whole, will not see the great aim of that of which their specialty is a mere trifling part.

The whole embraces the particular, and the latter derives its alms from the former. The judgment of the specialist is easily prejudiced, and becomes one-sided. His line of argument is defective, not infrequently totally faulty, and the boundaries of his horizon are often congruent with the narrow boundaries of his native city or village.

Nothing is more dangerous in science than spinning oneself into a cocoon of small and smaller circles of thought, and the miserable "Do not disturb my circles!" called at every one who approaches these narrow minds with demands of a loftier nature. Science can be kept young, can be constantly rejuvenated, if its

disciples will, by inductive reasoning, rise from the particular to the general and go back again, by way of deduction, from the general to the particular.

If anybody should be conscious of this, it is the teacher. If he satisfies himself with doing his duty within the four walls of his schoolroom, he will soon degrade his art to a mere handicraft. No science deserves to be called "associating science" more than our professional science "Pedagogy." It is said that he who thinks about education, thinks about everything. And if we consider this in the true sense in which it is meant, there can be no presumption in it.

If you are placed in charge of the abecedarians, you should at least know the course of study of the whole range of grades following. But at whatever stage in the curriculum of a school fate may place you, you should distinctly understand the connection between school and life, and the relations between school and home. You should at every step know the true end and aim of education, and be constantly aware that whatever apparently trifling thing you are teaching, it must, like every other part of school education, have its bearings upon the future destiny of the child. I say this because it is a world-wide fallacy to think little is necessary to teach the young, shooting mind.

I remind you of the Jesuits, whose schools, though built upon totally different principles from those of our common schools and aiming at totally different objects, were noted for more than one hundred years for their wonderful results. I say, the Jesuits placed young beginners in middle and high grades of school, and promoted them downward according to their degree of proficiency and excellence. If this proves anything, it proves that these, though in more than one regard despicable men, knew the value of elementary education. It is an opinion that needs to be fought; namely, that *any* teacher is good enough for the beginners. The best one is *barely good enough* for the youngest pupils.

That, however, I trust you know full well. What I mean to emphasize is, that you should foster an impatience with yourself, so that you will not sink into that self-satisfaction which is the arch foe of all real progress. Practice in the schoolroom is very apt to make you self-satisfied, and if you do not earnestly strive forward and upward, you will in the course of a few short years have a lamentably small horizon of thought. This danger is less imminent where you are called upon to teach a variety of subjects; it is greater if you are to be a specialist.

Now, you do not and can not foresee where fate may place you, and what duties may fall to your share; but that much you do know, that if in a few years your teachers and colleagues ask, "What has become of her?" the answer comes, "Lost to the cause; crushed by the machine; swept away into a forgotten corner; heard of no more,"—I say you'll know, if this be said of you, that it is your own fault. The vicissitudes of life may knock you about, fate may deal hard with you, but I implore you to keep fresh within your heart and mind the source of rejuvenation, so that you be not dead to the profession, so that no monument in the hearts of your teachers be erected, bearing the inscription: "Sacred to the memory of one who lost all that was valuable; to wit, himself."

Perhaps the hardest struggles, the fiercest battles, which you will have to go through, will have to be fought with yourself; it is true what the poet says: "*Vor die Tugend haben die Goetter den Schweiss gesetzt.*" (Before virtue the gods placed perspiration.)

I remain yours, ever optimistically, L. R. K.

Do not be frightened from the "question and answer" method by any institute criticisms or modern sarcasm. Avoid its abuse, but do not fear its use. Questions that quicken thought are valuable; those which merely tend to have facts known long enough to be stated are worthless.

FIRST LESSONS IN SEWING.

BY M. E. C.

PRESUPPOSING the children have had a slight experience of surface, introduce small cards with unbroken surfaces. Each child, being invited to examine his card, discovers some of its properties, of which he is led to freely speak, thus developing the power of language, as well as observation. He will quickly learn that the card is white, smooth, made of "thick paper"; is possessed of faces ("sides"), edges, and corners; by judicious leading he will also discover that two edges of the card are longer than the other two.

At this point produce a second card, perforated by two rows of good-sized holes. A comparison of cards gives the child a new experience, because of the roughened surface of the new card. The similarities of the cards are readily recognized, while the roughness of the new cards is attributed to the perforations. A little drill (in the way of play) in turning up the rough or smooth sides as directed by the kindergartner should precede the use of the needle.

This needle-use practice will be more satisfactory if the child imitates the teacher, who, holding a card, thrusts the needle through from the rough to the smooth side,—beginning of course with the first perforation of the upper row of holes, and going next to the first of the lower row.

The next exercise may be one upon needle-threading, or actual sewing; the choice depends upon the class of children with which one labors. If the lesson is to be of the former nature, gather the children about you, and, while telling the story of "Little One Eye," aid each child in threading the needle. If the exercise be of another nature, choose *one* sewing-card (perforated with several rows of holes), and *one* needle threaded with a medium length of worsted. Each child in turn holds the card properly, and sews a few stitches under the close supervision of the kindergartner. This card, upon which each child has worked, can be finished at one lesson, and when hung upon the wall will be a real joy to the little makers.

When several "family," or class-cards have been made, the children will be able to sew an entire card individually. The individual cards should have but two rows of perforations, and with the threaded needles, be kept tidily in portfolios made for the purpose. Many kindergartners allow the child to choose his color for sewing from a mass of worsted, but it will be of greater advantage, if the number of colors be limited to two or three in the beginning. By the latter means a better color impression is received, and a better degree of taste will consequently be developed.

Many lessons will have passed, before the class, as a whole, will have accomplished the art of threading the needle unaided, even though the worsted be waxed; and

many more must be devoted to beginning and fastening off with the worsted, since untidy, careless work of any kind is wholly foreign to kindergarten principles.

Several schemes of sewing are now in use, but nearly all teachers agree that the sewing and drawing must supplement one another, therefore the form outlines used in drawing may be repeated nearly in sewing.

TABLE MANNERS.

(As taught in Philadelphia.)

IN the sub-primary schools of Philadelphia they have a fifteen-minute lunch time in the mid-forenoon, which is utilized for teaching table manners and etiquette. The twenty-five little people under six years of age are seated about their four kindergarten tables arranged in a hollow square. Each child provides himself with a napkin, which he spreads as a table-cover before him and arranges thereon his simple lunch. They are allowed and encouraged to talk as they eat, observing not to talk when another is talking, not to interrupt another, not to take too much of the time from others, not to tell long stories. The teacher leads them frequently in the talking.

Upon the day of our visit she was asked by a little girl to cut her apple. In doing so the teacher talked about, and asked questions about, the seeds, the skin, the pulp, the apple-tree, the uses of the apple, etc. She was asked by another little girl to peel an orange, and the conversation turned upon the use of the peel, its likeness and unlikeness to the skin of other fruits that they had eaten. Speaking of the crackers that several of them had, they talked about what the cracker was made for, by whom it was made, what flour comes from (one little girl answering promptly that the flour came from the barrel); what it was before it was flour was the substitute question, to which several could give a correct answer; and the conversation closed with a talk about the men who raise wheat and what they plant to grow wheat.

They are also taught to be generous, sharing with the nearest neighbor, taking special care that no little companion is slighted or neglected in such mutual sharing. Use of spoon, fork, knife, etc., is taught whenever an opportunity offers. After lunch one little boy or girl from each of the four tables brushes up the crumbs, collecting such remains of the lunch as are to be thrown away. It was a surprise that so much could be done by way of forming habits, and that it had not been more generally practiced with little folks in school. Fifteen minutes thus spent each day is well spent as a part of the recess time, if our observations in the Philadelphia schools are reliable.

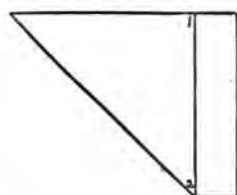
THE Cook County Normal pupils make fine projection maps with much skill, at slight expense of time and material. A projection globe is quite an institution with them. Every graduate makes for herself a full set of projection maps.

METHODS FOR THE SCHOOLROOM.

LESSONS IN CUTTING.

BY ABBIE M. WHITE, PROVIDENCE, R. I.

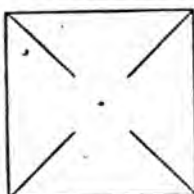
WHAT do my little friends want to do to-day? Cut? Very well; you all remember how we folded a square (AMERICAN TEACHER Supplement for September) by placing the left pointer finger on the lower left-hand angle of the oblong piece of paper, taking the lower right-



hand corner or angle in the right hand, and folding the lower edge over to meet the left edge; we then cut along the edge 1, 2. When we fold the paper as we have just done, or draw a picture of the fold, we call them (fold and picture) the diagonal of the

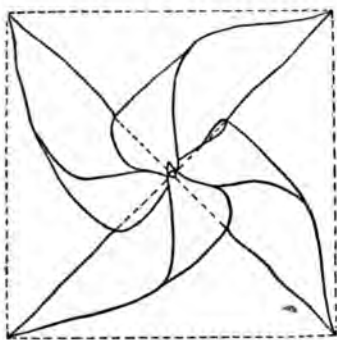
square. Open the square so the diagonal will be vertical.

How many diagonals have we? "One, Miss —." How many diagonals can the square have? The little girl, too shy to venture an opinion, shows Miss — where hers might be folded on the horizontal diagonal. The school of eager workers watch Miss —, and then fold their papers in like manner. We now open



the squares and cut the diagonal to within an inch of the middle of the square. We have a fairy wand which turns into a "table," "tub," "triangle," etc., and we have found by close examination that each one of these three parts of the wand is as long as

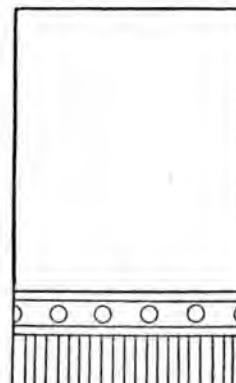
twelve little splints (one inch) placed end to end. Now we will stick a pin through the corners, then through the middle of the paper, and we have "a pin-wheel," which we may take home and fasten to a stick.



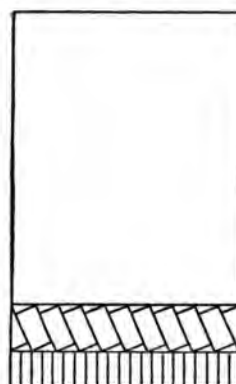
If any teacher is skeptical concerning the enthusiasm of a class over an exercise, or, indeed, over any exercise in cutting, we would like to have her see any class that has been taught in this way and note the animation of the children when the little toy appears. They come to expect every lesson in cutting to eventuate in some toy, and are keenly alive to the possibilities and probabilities in every lesson.

What shall we do with the piece of paper that

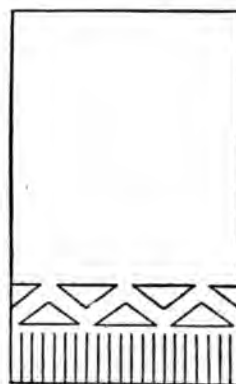
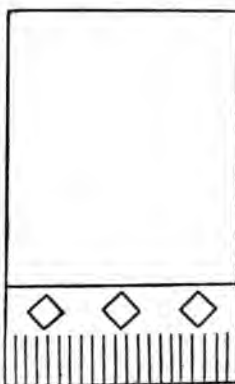
is left? "It could be a towel if it had a fringe." Yes, indeed; let us try and make a fringe. So we cut on the short edge of the oblong a fringe. Some are long,



others short, but we have learned a little about proportion and have become interested in towels. The eagerness to make a border for the towel has caused all



to forget their disappointment in the fringe enterprise, but we have only this piece of paper! So we try making borders with tablets; then if they want to make a border at home they may.



Next morning school opens with a towel exhibit, and Miss — thinks the little hands that fashioned such pretty borders must have been very clean!

FIRST LESSONS IN READING.

THERE is now no trouble in finding an abundance of the choicest supplementary or alternate reading-books for children who can read, but with all modern arts and publishing enterprise it is not easy as yet to find just what one wants for sight-reading for the youngest pupils. There is a tendency still to use the old, stilted, unnatural sentences, which the child would never use, will never, and by trying to use them he acquires habits of calling words unnaturally from which he never recovers. Children will never be taught to read naturally by saying,—



*It is a man.
Is it a man?
I see a man.*

*Do you see a man?
The man has a hat.
Has the man a hat?*

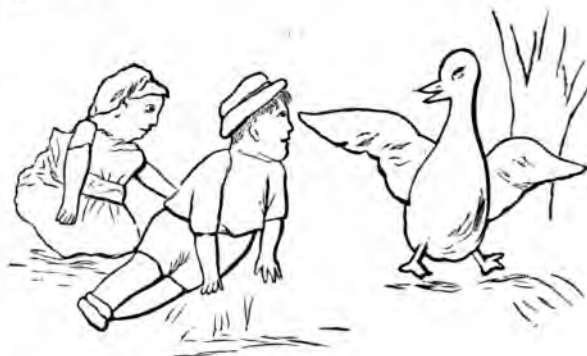
All this will some day be relegated to the archives of educational curiosities. A child will learn a word of six letters as easily as one of two, and usually much more readily. It is his interest in what the word represents, rather than the size of the word, that usually determines his remembrance of the word, its pronunciation, meaning, and use. The little words *it, is, a, as, see, do, we, us, as*, so make no end of trouble for young children, if all the words are short, but the words *horse, bear, base-ball, sail-boat* will rarely give trouble.

A sentence that has no attractiveness will rarely be well read, its words will rarely be remembered, while one that catches the ear by its melody or by its suggestiveness will enkindle their interest every time, will be read with expression and its words will be remembered.

The question is, how to get such sentences in the first place, and how to get them before the children as real reading-lessons in the second place. We give one admirable way. We know this because we have seen it tried.

Take a simple picture, easily drawn (we have been at the expense of having three re-made exactly as they were made, in size and every other way), and have them drawn in ink that may be used with the hektograph, and then take off enough of these for the use of the class. Let each child think of something to say about it, and then let him say it. Write upon the board what each child

says about it, just as he says it. From these sentences select the best, write them below the picture used on the hektograph, and take copies of the picture and the child-made sentences together. Use these for a genuine reading-lesson.



It takes time, skill, patience, but it pays. The day has gone by when a lady can teach a primary school because she has nothing else to do, and doesn't wish to do much there. These slips can be preserved for use with other classes. They can be exchanged by different teachers and used with good effect. A few new ones made each year for the sake of interesting the class in making their own reading-lessons will make the use of the others very satisfactory.

The chief difficulty will be that the teacher will say she cannot draw the picture. Many teachers cannot, but they can usually find some friend, some pupil in upper grades,



who can, and whoever can will do it for sheer love of it; for it goes without saying that whoever loves to draw will make pictures for fun, and to see their pictures multiplied by the hektograph will be sufficient reward.

The three pictures woven into this article were drawn with exactly this effect and with little effort; were drawn for the hektograph and multiplied by it, and bright little

reading-lessons produced as a result. It is impossible to give any idea of the fervor with which the little folks will read the lessons the next day. They put their whole soul into it, and vie with each other in trying to read it so as to have it appreciated and enjoyed. The first cut of the little boy furnishes no end of sentences:

See John's spade.

I can dig.

He is going to dig a hole.

I guess he hid a tin can in a hole.

I can dig a hole for a tin can.

He is digging worms to fish with.

Having these slips for frequent use, there is no difficulty in teaching a great variety of words, and the very words they want to know, because they are the words they use. As a language lesson it is as valuable as it is for a reading-lesson. The hektograph need not cost much of anything. The following recipe is a good one, and will give as good a hektograph as can be bought for four times the money:

- | | | | | |
|---------------|---|---|---|-----------|
| 1. Best glue, | . | . | . | 10 parts. |
| 2. Glycerine, | . | . | . | 50 " |

The glycerine should be of quality known in the market as "28." Two quarts of glycerine would make a hektograph of largest size. To make, the glue should be soaked for 24 hours in cold water. It is then put into an enameled pot over a slow fire. When it is thoroughly melted, put in glycerine and mix well. The composition is then to cool slowly, so air can escape. If bubbles appear, remove them with spoon before the composition is cool. If the hektograph is too hard, remedy with boiling water; if too thin, boil down a little.

This will print examination papers, outline maps, or topics and notes. Write a copy on ordinary paper with hektograph ink, then turn ink side down upon plate, and press gently. Upon removing copy an imprint will be found. By pressing clean sheets of paper to this, good duplicates can be obtained. A hundred impressions can be made, but not over fifty of them will be clear. After each finishing wash out the copy with a sponge saturated in soap and water.

To make hektograph ink (black):

- | | | | | |
|----------------|---|---|---|----------|
| Methyl violet, | . | . | . | 2 parts. |
| Nigrosine, | . | . | . | 4 " |
| Alcohol, | . | . | . | 12 " |
| Glycerine, | . | . | . | 6 " |
| Gum arabic, | . | . | . | 1 " |
| | | | | — |
| | | | | 25 |

In one primary school in which was a full set of tin measures and wooden measures, the teacher said one day, "Let every child who can, bring some beans, corn, peas, oats, or barley,"—and she had more than a peck. It is impossible to specify all the uses to which the teacher put this grain. It was measured, talked about in number work, used for language lesson on beans, corn, peas, oats, and barley; the bean was talked about in relation to each of the others, so was the corn, etc.; the different varieties of beans were talked about, etc. All in all, the teacher got from that medley a variety of lessons that marked her genius. They made their own problems with this grain after this fashion: "I had 3 pigeons, and they ate $\frac{1}{2}$ a pint a day. How long would 2 quarts last them?" They measured it out and saw the result for themselves.

HOW TO TEACH A CHILD TO TALK AND READ.

[Written editorially after a careful study of Anna B. Badlam's "Suggestive Lessons in Language and Reading."]

FOR TALKING.—Distribute common objects to the children, and ask each child to tell what he has, or what the teacher or some other member of the class has, as: "I have a ball." "John has a top." "You have a bell."

Remove the objects, and ask the child to tell what object he had or any other child had. "Fannie had a book." "You had a bell." "I had a ball."

With no object in hand, ask them to look about them and tell what they see. "I see a map." "That is my hat." "There is a desk."

Ask them to say something about what they saw

In their home this morning.

Upon the street.

About some friend.

About some pet animal.

About some plaything.

About something they have heard.

About something they have tasted.

About something they wear.

Name some objects that are

large	small	dark	light
long	short	sweet	sour
new	old	hard	mellow
dull	sharp	tender	tough
dull	bright	rough	smooth
heavy	light	thin	thick.

Tell of something that

ticks	rolls	swings
rings	blows	strikes
falls	runs	leaps
trots	barks	sings
jumps	talks	whistles
eats	drinks	kicks
bites	sleeps	cries
grows	cooks	sweeps.

Tell of something that

ticked	heard	the clock ticks
struck	rolled	the bird sings
walked	flew	the rain falls
raced	fell	the sun shines.
cooked	cried	
swung	crept.	

Tell where

the drum was
the book is
the basket was
the chalk is
the dog may be
you are
I am.

Tell when

the school begins
the breakfast was
the supper is
the recess is

Tell how long

the recess is
the day is
the week is
the month is

Tell whose

book you have
hat I have
rule that is
dog barked.

Say something and use the word

I	we	they
she	he	her
him	them	it
his	hers	yours
who	whose	whom
why	which	how
when	where	what
how many	how much	how long
pound	quart	gallon
yard	foot	inch
spool	sheet	dozen.

FOR READING.—We give only a few suggestive exercises. Teach with much care the correct pronunciation and enunciation. Be sure that they know how to pronounce correctly when they first use a word. Do not stop them in the reading to pronounce clearly, but when words are taught, have them well taught. Having taught one word carefully, fix the essential part of it by making many words like it.

hill	up	pail	went	sack
will	cup	nail	sent	rack
fill	pup	tail	bent	tack
spill		snail	lent	hack
		mail	tent	pack
			vent	

b h l s gr	sch t c p
and	ool

f m p s c h b th
at

n h g l	w b t s N
ot	ell

s p h f kn	fl m cr tr sl
it	y

d m p s w g h l	tr s thr kn
ay	ee

sh w h m	tw d wh t
e	o

t b r p pr	n h b c	f b w m k r gr
each	ow	ind

h l m p sn scr	d sl k sh cr st
atched	eep

l m g p s w n y	n m f p d l sh tw
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LANGUAGE TALKS.—II.

BY LULU M. BAGLEY.

IS it possible to teach technical grammar in the lower grades of grammar schools? This is now a trite question, and the answer may be, "Yes; it is both possible and profitable, if the pupils have been sufficiently trained in the use of language." "As grammar was made after language," says Spencer, "so should it be taught after language." To use language well the pupils must have various exercises that will enable them to speak correctly, read and write fluently.

If there is time, and there will be enough only under most happy conditions, connect the study of grammar with that of language. Remember, however, that "grammar is not the stepping-stone, but the finishing instrument." Nearly all lessons may be made language lessons. Reading, oral and written spelling, enunciation, pronunciation, definition of words,—all are subdivisions of this important study. If we are to train our pupils to express their ideas clearly, we must also train them to understand what others say. This is an important point, as the proficiency attained in any study depends in a great measure upon the ability to understand the language of others.

To outline a course of study in language is a difficult task, as the plan of work depends upon the present attainments of a class as well as upon the end in view. The following outlines of work used by a teacher, who was allowed a go-as-you-please route in language teaching may, be suggestive to teachers of fourth and fifth grades. The outlines indicate most of the topics. The schedule after each outline suggests method of one week's work, but the limits of the article do not permit of the details of methods used, or the noting of incidental language building.

Teachers should bear in mind the amount of work to be done during the year, and so apportion each month's work as to make, easily and without hurry, the advance required. A "new departure," if I may so call it, was made last year by one of the most practical superintendents in New England. He advised, urged,—nay, insisted that his teachers should strive to cover the course of study outlined for his or her grade, the first six months of the school year. The latter part of the year was given to reviewing and strengthening. The advantages of this plan were soon appreciated by the teachers. There was less superficial learning, and the brighter children had the opportunity of securing promotion at the end of the first six months, while the less advanced had the benefit of a double drill.

FOURTH YEAR.

I. *Synonyms*.—Defining words in reading and spelling lessons by substituting other words.

II. Use of the common contractions, abbreviations, and quotation marks.

III. Reproduction, oral and written, of reading lessons, pictures and object lessons.

IV. Teach that three or more things of the same kind following one after the other make a series.

V. Use of comma between names of a series; noun of address must be separated by a comma.

VI. The four kinds of sentences,—declarative, interrogative, imperative, and exclamatory.

VII. Exercises in supplying ellipses in sentences.

VIII. Correct use of so, sew, sow; died, dyed; heal, heel; sells, cells; lie, lay; lying, laying; threw, through; their, there; pair, pear, pare; hole, whole; great, grate; bare, bear.

IX. *Simple Forms of Letter Writing*.—Particular attention to form, arrangement of parts, division into paragraphs, use of capitals, marks of punctuation, and the items of address on the envelope.

X. Use of apostrophe in nouns denoting ownership.

XI. Get from the children descriptions of places, objects, or people, by placing brief, suggestive outlines on the blackboard.

XII. Division of words into parts of speech called noun, pronoun, adjective, verb, and adverb. First teach objectively.

XIII. Construction of sentences in which subject and predicate are each expressed by a single word.

XIV. Choice selections to be memorized.

XV. Writing of singular and plural forms of nouns.

SCHEDULE—FOURTH CLASS.

Monday.—1. Reading of the poem, "Wives of Brixham."

2. Talked about the poem; gave synonyms; used new words in sentences.

Tuesday.—1. Reproduction of the poem in prose.

2. Division of above into paragraphs; use of capitals. Class and individual work.

Wednesday.—1. Naming three kinds of sentences found in the poem,—declarative, interrogative, and exclamatory.

2. Use of the apostrophe.

Thursday.—1. Children wrote a list of nouns in the poem, and another list containing the words (or synonyms) used to describe the nouns.

Friday.—Copied and committed poem to memory.

FIFTH YEAR.

I. Review essential work of the fourth grade continually.

II. Write letters of friendship and business; notes of invitation, acceptance, or regret; advertisements, and answers to various forms of advertisements.

III. Descriptions, oral and written, of familiar objects or places.

IV. Describe pictures, and write stories suggested by them.

V. Synonyms of words in language lessons.

VI. Parts of speech:—Nouns,—common and proper.

VII. Exercises in combining two or more statements into one simple sentence.

VIII. Write sentences containing verbs in different forms.

IX. Plural of nouns ending in *f* or *y*.

X. Give, orally and in writing, meaning of proverbs.

XI. Correct use of flew, flue; coarse, course; seen, scene; berry, bury; fair, fare; pain, pane; accent, accent'; produce, produce'; export, export'; import, import'.

XII. Simple subject and predicate.

SCHEDULE—FIFTH CLASS.

Monday.—For the purpose of teaching the meaning of ordinary words, and adding to the children's vocabulary, I put on the blackboard an advertisement, varying forms and expressions always, but electing one that has an interest for children:

WANTED.—In a grocery store an active, intelligent boy. Address in own handwriting, stating references and experience. — J. F. IRENE, City.

We explain and talk about the words italicized, and request the children to use these words in original sentences. (Several chances may have to be given before all the pupils grasp the

ideas presented by the word.) The children then write a short letter applying for the position. When the letters are finished we select a letter, copy on the blackboard, and ask the pupils to criticize. This verbal criticism tends to make the children quick in the detection of errors, and careful in avoiding like errors themselves.

Tuesday (Direction to Pupils).—Correct each other's letters (written on Monday), using proof-readers' signs. Fifteen minutes were for this work, then a final "overlooking" by the teacher, and the letters were copied in blank-books kept for written exercises.

Wednesday.—Verbs; write in the plural form:

1. The pupil's pen writes.
2. The soldier's gun broke.
3. The child's trunk was lost.
4. The steamer sailed.
5. The goose's bill was hurt.
6. The woman's dress was torn.

Thursday.—Select one of the New England cities, and, by referring to your geographies, prepare an oral abstract, using the following outlines:

1. *Situation*.—In what state; near or on what river, lake, bay, or other water.
2. *General Description*.—Size, trade, railroads, steamers, factories, products, etc.
3. *Special*.—Mention any objects of interest, such as mountains, hills, lakes, rivers, canals, parks, buildings, etc.

Give any interesting event in the history of the place. When prepared, each pupil may give his abstract orally, but withhold the name of the city until the other pupils have had an opportunity of guessing the name. The children call this a "geography game."

Friday (Sentence-making).—1. Write, with each of the following nouns for a subject, a sentence having a predicate consisting of the verb *is*, with a noun in the predicate nominative: Italy, Australia, Boston, The Sahara, The Silkworm, Iron.

2. Write two rules for politeness, making them simple sentences.
3. Combine the two statements into one.

ESSAY ON BLUEBIRDS.

[This essay by Julia Bennett of the sixth grammar grade of the Jones School, Chicago, is not above the average of the better half of the class, and was selected in preference to a score of others because the illustrations were more easily utilized by us. We present the drawings as they were made by her. Miss Mary E. Burt, the teacher, has succeeded in having her classes thoroughly enjoy "Wake Robin," "Pepacton," and similar works of John Burroughs and others. We give this composition because we think it vastly better that children should learn of the bluebirds and other of Nature's beauties and curiosities from a writer like John Burroughs than from an incidental reading of newspapers or from any other pen than that of a master.]

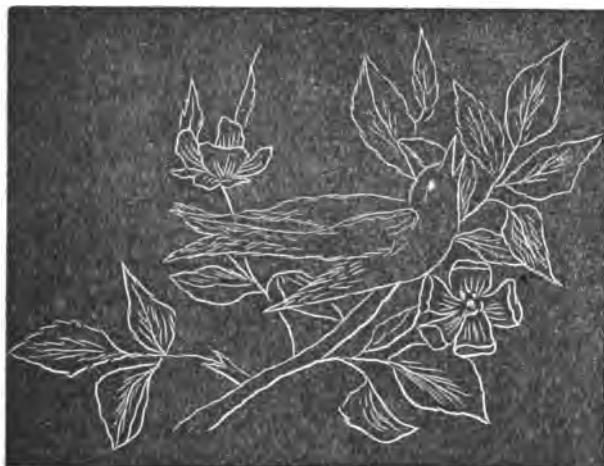
ESSAY ON BLUEBIRDS.



WHEN reading "Wake Robin" a book we have in our School Library I was impressed by a selection called The Bluebird. John Burroughs is the author of Wake Robin, and Pepacton which we have also. He

says, "when Nature made the bluebird, she wished to make friends between the sky and the earth, so she gave him the color of the one on his back, and the hue of the other on his breast, and says that his appearance in spring should show that the strife and war between these two elements was at an end." He is the peace-bringer; in him the sky and earth clasp hands, and are fast friends.

It is sure to be a bright March morning when first you



hear his note. He seems to say, "Bermuda! Bermuda! Bermuda! and behold! Bermuda follows close." "In New England the sap starts up in the sugar-maple the very day the bluebird appears, and sugar-making begins forthwith." The males always come three or four days ahead of the females; by the time they both are here, and have looked for a place to nest, sugar-making is over, and the last bit of snow has disappeared, and the plow is beginning to turn up the land.



The bluebird is the first colored bird that brightens our northern landscape. Other birds arrive about the same time. The bluebird has the honor of being very much like the Robin Redbreast of England, and was by early settlers of New England called the blue-robin. The habits of the two birds are very much alike; our bird has the softer voice, but the English redbreast is the more skilled singer. Among the British there is no blue bird.

The bluebird builds its nest in a hole in a stump, or in a cavity made by a wood pecker. The male bluebird is a very happy and devoted husband. The male's life all poetry and romance, hers, business and prose; she shows no love or affection for him, no pleasure in his society. There are no old bachelors from choice among the birds; they are all rejected lovers, while old maids are entirely unknown. There is a Jack to every Jill, and some to boot.

THE REVOLUTIONARY WAR. — II.

BY CHARLES F. KING, BOSTON.

[For "Causes and Preliminary Events" in the first article, see page 5 in the September TEACHER.]

Permit me briefly to explain the method usually practiced with this topical outline of the Revolutionary War in order to create an interest in the subject. To write upon the board, or to dictate to a class all the matter presented in this and the former article, would be the greatest folly. We presume all our readers are more psychologically intelligent than that. In order to give the class a part in the work, we divide our largest blackboard into four wide columns, as on page 5, Sept. TEACHER.

The children rule their papers or slates in the same way. I ask individual pupils to name some cause of the war, using their books all they please. As they are named, teacher and pupil write them in the record column. Very likely they will be mentioned in some such order as the following: Stamp Act, Boston Massacre, Port Bill, Tax on Tea, Writs of Assistance, Navigation Act, Tea Party, etc. Then an attempt is made to classify these causes, in which the pupils can be encouraged to assist, by questions such as these: Is the same thing mentioned more than once? Tea. How many, and what causes, relate to taxes? Stamp Act, Tax on Tea, Writs of Assistance. What causes referred especially to acts of violence, etc.

The teacher will be obliged to help in many cases before the two great groups of causes are arranged as given; but, meanwhile, the class have been busy, and consequently happy and benefited. When the causes have been satisfactorily grouped, arranged in order of time, and a few dates supplied, they are rewritten in column three, and column two is erased.

We are now ready to attend to column four, the children being asked to suggest interesting facts, the names of persons connected with events mentioned in column three some story or anecdote. The pupils will begin to search their text-books and to learn the value of one or two extra books, and to consult other sources of information. As rapidly as proper matter is presented, it is written by one of the pupils in column four, on a line with the cause referred to. The "Teachers' Side Lights" are not put on the board at all, but a similar column might be headed, "Books of Reference." The three columns should be copied into the blankbooks.

THE THREE CAMPAIGNS.—II.

I.—WASHINGTON'S CAMPAIGN.

<i>Principal Events.</i>	<i>Pupils' Side Lights.</i>	<i>Teacher's Side Lights.</i>
Taking Command at Cambridge, 1775.	Washington Elm. Headquarters. Condition of the Army; "Powder!" Ticonderoga and Ethan Allen.	<i>Bancroft's</i> , vol. V. <i>Camp-Fires of the Revolution</i> , p. 37. <i>Boys and Girls of the Rev.</i> , p. 125. <i>Hist. Fields of Middlesex</i> , p. 247. <i>Soldiers and Patriots</i> , page 84.
Dorchester Heights, 1776.	Passed through Roxbury.	<i>Bancroft's</i> , vol. V., p. 301-366.
Declaration of Independence, July 4, 1776.	Jefferson. Independence Hall. The Bell.	<i>McMaster's Hist.</i> , vol. I. <i>Richardson's Our Country</i> , p. 221. <i>Fourth of July</i> , — 100 <i>Selections</i> , No. 22, page 7.
Long Island.	Uncertainty. Flank Movement. American Prisoners. Matthew Hale.	<i>Boys of '76</i> , page 91.
White Plains.	Gen. Howe. Gen. Putnam.	<i>Memoirs of the Long Island Hist. Soc.</i> , vol. XI.
	Forts Washington and Lee.	<i>J. R. Simms's American Spy</i> . <i>Camp-Fires of the Rev.</i> , p. 181.
Retreat through the Jerseys.	Washington Crossing the Delaware. Securing the Boats.	<i>Bancroft's</i> , vol. V., p. 454.
Trenton, Dec. 26, 1776.	Recrossing second time. Marblehead Boys.	<i>Irving's Washington</i> , vol. II. <i>Soldiers and Patriots</i> , page 157.
	The Surprise. The Letter. Washington at the death-bed of Rahl. Effect on the Country.	<i>The Boys of '76</i> , page 129. <i>Around the Yule Log</i> , 196.
Princeton, Jan. 3, 1777.	Fabius Washington. "We'll bag the fox in the morning." Sudden freezing of the ground.	<i>Lossing's Field-Book</i> , vol. II. <i>Irving's Washington</i> , vol. II.
	Frederick the Great of Prussia praised Washington.	<i>Bancroft's</i> , vol. V., page 491.
(Morristown, 1717.)	Robert Morris.	<i>The Boys of '76</i> , page 139.
Brandywine, Sept. 11, 1777.	Howe's Movements via Chesapeake Bay to Philadelphia. Chod's Ford.	<i>Camp-Fires of the Rev.</i> , page 107.
	Flank Movement.	<i>Camp-Fires of the Rev.</i> , page 309.
	Lafayette wounded.	<i>Bancroft's</i> , vol. V., page 593.
Germantown, 1777.	1000 men barefoot. Fog. Retreat at the moment of victory.	<i>The Boys of '76</i> , page 195.
Valley Forge, 1777-1778.)	Terrible sufferings. Sentinel frozen to death. Insufficient quartermaster.	<i>Irving's Washington</i> , vol. II. <i>Camp-Fires of the Rev.</i> , page 144.
	Washington at prayer.	<i>The Boys of '76</i> , page 215.
	Conway Cabal. Dark days.	<i>Bancroft's</i> , vol. VI., page 36.
	Howe's gay winter in Philadelphia.	<i>The Boys of '76</i> , page 254.
	Franklin's remark.	<i>Lossing's Field-Book</i> , vol. II., 331.
Monmouth, June 28, 1778.	Howe evacuates Philadelphia.	<i>The Boys of '76</i> , page 269.
	General Lee. Washington's anger.	<i>Bancroft's</i> , vol. VI., page 137.
(Massacres.)	Mary Pitcher.	<i>Dawson's Battles</i> , chap. 37.
	The three Butlers,—John and Zebulon; John's son, Walter.	<i>Soldiers and Patriots</i> , page 192.
(No movements, 1779-80.)		<i>Camp-Fires of the Rev.</i> , page 268.
Arnold's Treason (1780).	His first career. His subsequent career. Married a Tory lady. His reward.	<i>Cooper's Spy</i> .
		<i>Bancroft's</i> , vol. VI., page 315.
		<i>Sabine's Am. Loyalists</i> , v. I., p. 171.
		<i>Boys of '76</i> , page 303.
		<i>Camp-Fires of the Rev.</i> , page 309.
Yorktown, Oct. 19, 1781.	Cornwallis in the South. Rochambeau, Count de Grasse. De Barras; Lafayette. Washington's plans. 12,000 Americans.	<i>Dick's Rec.</i> , No. 3, p. 23; Arnold, I. N. <i>Life of Arnold</i> .
	French vs. Americans; The storm.	<i>100 Selections</i> , No. 17, p. 161.
	The siege lasted two weeks.	<i>Magazine of Amer. Hist.</i> , v. VII.
		<i>Bancroft's</i> , vol. VI., page 810.
		<i>The Boys of '76</i> , page 380.
		<i>Camp-Fires of the Rev.</i> , page 399.
		<i>Soldiers and Patriots</i> , page 205.
		<i>Richardson's Our Country</i> , p. 271.

THE AMERICAN TEACHER.

A. E. WINSHIP, }
W. E. SHELDON, } *Editors.*

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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WHAT have you read during vacation?

THE child must be taught to judge for himself.

THE summer schools scored another season of acknowledged success.

THE schoolroom should strengthen the judgment of the pupils.

MAKE the lesson genuinely interesting to the dullest pupil,—if you can.

EVERY study should be a thoroughly effective and valuable educational discipline.

YOU must be systematic in your methods and work, but do not say too much about it.

THE child must be taught to use his own eyes in observing the things and activities about him.

THE schools doing the best educational work are generally provided with teachers' libraries.

IT is not enough that facts be observed. They should be apprehended in such a way as to give real joy through the vividness with which they are appreciated.

TEACHERS year by year become better acquainted with "mind studies," and thus produce better results at less

expense of time and energy. Teacher and taught are gainers.

UTILIZE every passing event that will help to rivet the attention of the pupils in the regular school work, but do not let any side thought divert their attention from their work.

ONE of the most diligent students in a certain summer school this year was a veteran who began teaching forty years ago. He proudly declared himself "not yet too old to learn."

Do not fear to be conversational and even "homely" in your manner with the class, so long as you can command their respect. You are more certain of their attention and interest by so doing.

YOU need not be a naturalist to do your pupils great service in studying nature. You need not make naturalists of them in order to benefit them. The study of nature and a love of nature are permanent luxuries of a noble mind.

THE managers of one educational meeting the past summer gave as one cause of the small attendance, the number and success of the summer schools. If this is true, the leaders of educational thought should take heed and govern themselves accordingly.

THE SUMMER SCHOOLS.

THERE were in various parts of the country no less than *twenty* different summer schools in active operation the past season. The number of students in these new institutions of learning must have reached over two thousand, as several schools had each over two hundred attendants.

Students gathered from every state in the Union to enjoy the privileges and benefits of these new helps for gaining information and learning the better methods of instruction. The State of New York honored itself by sending the largest number of students, and Massachusetts and Pennsylvania sent the next largest number.

The educationally awakened South has generously patronized the summer schools, sending to one school in the North no less than sixteen teachers, seven of whom came all the way from Louisiana.

School committees and superintendents unanimously testify to the greater enthusiasm and the better results obtained by those teachers who have taken advantage of this means for self-culture and self-improvement. The students testify to the greater enjoyment and ease in teaching school after a few weeks spent in recreation and social pleasure pleasantly combined with a little mental work. Many of these teachers are being frequently rewarded for their self-sacrificing exertions for educational growth by advanced positions and new but unsought honors.

THE SCIENCE OF DISCIPLINE.

THERE can be no success in teaching without good discipline. A combination of all other virtues is of no avail to the teacher who cannot govern the school. The children will not learn without they are well governed. The committee will not sustain the loveliest girl, with the most influential friends, who ever graduated from a normal school, whatever her virtue, fascination, or love for children, if the discipline of the school be lax.

Must this gift be born to the teacher? There are some teachers who were born to discipline any school without apparent effort. There are some men and women who would like to teach who are born to fail in the easiest class in the world. There are, however, few who do not have to learn to govern effectively, and there are fewer who may not learn to do it if they will. Some qualities must be born to the teacher; these are given to almost every person who would aspire to teach.

There are in every school three classes of pupils: A few thoroughly vicious children, who bear about the same relation to youth in number and characteristics that the confirmed criminal bears to manhood; a generous number of uniformly good pupils, who have neither the habits, association, or disposition that tends to mischief, and a larger number, the great middle class, whose disciplinary vice or virtue depends upon circumstances, companionships, treatment, and personal conditions.

In order for one to study how to discipline it is important to know and appreciate the obstacles. Home influences will easily demoralize a pupil when parents or older children tell of the mischievous tricks of their school days, criticise existing methods, or underestimate the teacher. The teacher should learn of the home influence about any pupil tending to disobedience, and so counteract the evil associations through a visit to the home, or by other means, as to make the home a help rather than a hindrance.

Public sentiment sometimes sets against a teacher by prejudices that are indefinable, making it publicly popular for children to be mischievous; and when such a condition of things exists the teacher must be very careful not to be over severe upon the disobedient children, but rather, by great effort, and some sacrifice, if need be, win them to himself as against public prejudice, counteracting the antagonistic public sentiment, if possible.

The child's disposition not infrequently makes it practically impossible for him not to be mischievous. He may be impulsive by nature, with irresistible impetuosity, which, if anything unexpected thwarts him, leads him to say or do that which puts him in a rebellious attitude. Pride is frequently an obstacle to obedience. Sentiment may lead one to do what he would never do but for some sentimental fancy about such things. Sympathy for children under suspicion, censure, or punishment frequently prompts very good boys and girls to go wrong. Temporary ill health, misunderstandings on the playground, ridicule of play-

mates, the weather, poor ventilation, being late to bed, a poor breakfast, or even some ungracious word on the part of the teacher himself may cause disobedience by boys and girls who require nursing rather than sarcasm or the rod. The true disciplinarian appreciates all these conditions and obstacles, and never punishes or scolds when he should cheer, never punishes the wrong child, never mistakes a circumstantially mischievous child for a constitutionally vicious one.

The teacher frequently assumes an attitude before the school and the public which says, in substance, "I can make no mistake," while the child and the public know that he is at fault himself. Ill health, personal annoyances in society, home friction, a poor breakfast, social disappointment, financial losses, or other similar cause, may put him in a frame of mind that will make his very tone, manner, or facial expression provoke the average child to mischief, disobedience, or even open rebellion.

Obedience is the first object in discipline, self-control its ultimate aim. Obedience is merely a means to self-control as an end. The attitude of the teacher is very different while seeking to cultivate self-control in the pupil through obedience from what it is when he seeks obedience for its own sake. There are times in our experience, however, when the end sought is immediate submission. The very sentiment, in its height and beauty, which seeks the utmost serenity and power for each child, sometimes leads the pupils, as a whole, to take advantage of it, and brings about a state of things that needs the most prompt and vigorous treatment.

In seeking power of self-control the methods are altogether different from those employed in an immediate conquest. The public, with all its prejudice against the rod, expects and demands the suppression of every rebellion regardless of cost, but it will not tolerate the same spirit or methods in the regular work. The teacher must study how to affect the disposition, what motives to appeal to and cultivate, what influences to bring to bear to check hasty, impulsive, violent thoughts, words, or acts. How to overcome dispositional inertia; how to direct erratic tendencies; how to make pride and sentiment motives for loyalty rather than disloyalty; how to utilize the sympathies of the school.

The mental growth and development of the child require radically different methods and motives in disciplining children under eight from those between eight and fourteen, while these vary greatly from those above fourteen. We have not the space to enlarge upon these differences, which would require a chapter by themselves.

In a word, to succeed in discipline the teacher needs to study the general characteristics of the child mind, the peculiar circumstances of the specially disobedient, and apply remedies heroic in desperate cases, but as mild and developing as circumstances will allow. One must succeed at all hazards, but never by the use of a word or deed that can echo unnecessary harshness.

FOR FRIDAY AFTERNOON.

AN AUTUMN EXERCISE.

(Selected from the Poets.)

BY W. E. SHELDON.

Class in concert.—Golden Autumn comes again,
With its storms of wind and rain,
With its fields of yellow grain;
Gifts for man and bird and brute
In its wealth of luscious fruit,
In its store of precious root.

First Pupil.—SEPTEMBER. A pleasant look hath she,
Such as children love to see upon
Their mother's face when they her smile have won;
Let others choose their love,—September pleases me.

Second Pupil.—OCTOBER. A bird-note sounding here and there,
A bloom, where leaves are brown and sober,
Warm noons, and nights with frosty air,
And loaded wagons say,—October.

Third Pupil.—NOVEMBER. The touch of chill November
Falls on the waiting land;
The oak trees and the larches
With shivering branches stand;
And winter's desolation
Is felt on every hand.

Class in concert.—O birds! O leaves! O flowers!
O fading things and brief!
Our human lives are falling
As falls the Autumn leaf.

RECITATIONS.—WHAT AUTUMN BRINGS.

1. Who loves not Autumn's joyous sound,
When "corn and wine and oil" abound?
Yet who would choose, however gay,
A year of unrenewed decay?
2. I love the Autumn when the trees
With fruit are bending low;
When I can reach the luscious plums
That hang upon a bough.
3. . . . The golden corn
By many busy hands is shorn;
Autumn's ripe fruits an ample store
Are gathered in, for rich and poor.
4. Orchard trees with fruit are bending,
Harvest wains are homeward wending,
And the Lord all o'er the land
Opens wide his bounteous hand.
Trees bend down with plum and pear,
Rosy apples scent the air,
Nuts are ripening everywhere.

Class in concert.—A welcome to Autumn, the bountiful Autumn,—
The wealth of the year in her bosom is laid;
Partake of her fulness with joyful thanksgiving,
The toil of the Spring she has amply repaid.

RECITATIONS.—THE LESSONS OF AUTUMN.

5. Working away at the harvest, reaping the ripening grain.
Laying it down in ridges like the men of an army slain;

Foremost in toil is the reaper, with the sweat on his bronzed brow.
God bless the hand of the reaper, and send him vigor enow.

6. Almighty Father, the rolling year is full of thee;
Thy bounty shines in Autumn unconfin'd,
And spreads a common feast for all that lives.

7. What pensive beauty Autumn shows;
Before she hears the sound
Of Winter rushing in to close
The emblematic round!

8. The subtle frost hath plied its mystic art
And in the day the golden sun hath wrought
True wonders; and the wings of morn and even
Have touched with magic breath the changing leaves.
What gorgeousness, what blazonry, what pomp
Of colors, bursts upon the ravished sight!
Here where the maple rears its yellow crest,
A golden glory; yonder where the oak
Stands monarch of the forest, and the ash
Is girt with flame like parasite, and broad
The dog-wood spreads beneath a rolling field
Of deepest crimson; and afar where looms
The gnarled gum, a cloud of bloodiest red.

9. When Indian summer beams upon the earth,
Circling the landscape with a golden haze,
A quiet bliss, too deep for fickle mirth!
Then the monotonous green forsakes the woods,
And at my touch the trees in splendor shine,
The golden-rod adorns the solitudes,
The air is warm and balmy, like spiced wine.
Then comes the royal bounty of my hand,
The harvest and the fruitage of the land,—
Of all rich colors, and all lovely shapes,
From the brown nuts to the translucent grapes,
Showing more wealth than language can command.
The other seasons but prepare the way
For me, the crown and blessing of the year;
The poor of earth for my kind coming pray,
And unto all the Autumn bring good cheer.

10. Yet, though a sense of grief,
Comes with the falling leaf,
And memory makes the summer doubly pleasant,
In all our Autumn dreams
A future Summer gleams,
Passing the fairest glories of the present.

In concert.—'Tis Autumn's spirit, solemn and still,
That hovers o'er forest and field and hill
When the yellow leaves are falling,
And brown nuts drop in the sunny wood,
Where the partridge hides her timid brood,
While the hunter's hounds are calling;
When apples are ripe, and the reaper's tune
Rings cheerily under the harvest moon
And the loaded wains come home,
And the song-birds follow the southward sun,
And the trees stand tenantless, every one,
And the asters bloom alone.

RECITATIONS.—THE BEAUTIES OF AUTUMN.

11. Yet, how beautiful these autumnal woods.
The wilderness doth blossom as the rose.

12. The maples redden in the sun,
In Autumn gold the beeches stood.
13. On the hills the sumac burns,
In the wood the maple turns,

Dyed with the hues of the sunset sky,
Falling in glory so silently.
Beautiful leaves!
Withered beneath the frost and cold,
Soon to decay in the common mould,
Beautiful leaves!

So will the years that change your tint
Mark upon us their autumnal print;
So shall we fall from the tree of time.
Fade as ye fade in a wintry clime,
Beautiful leaves!

But when the harvest of life is past
And we wake in *eternal spring* at last,
May he who paints your brilliant hue
Form of our lives a chaplet new
Of beautiful leaves!
14. And when with Autumn's blast
Its golden-tinted leaves abroad are hurled,
Look if its trunk be hardy to the last,
For such will be our courage through the world.
15. Yes, the harvest season has come in her glory again
To teach us a lesson sublime,
To wake up the pure and good in our hearts
By the holy Autumn time.
16. Seeds of good or ill we scatter
Heedlessly along our way;
But a glad or grievous fruitage
Waits us at the harvest day.
Whatsoe'er our sowing be,
Reaping, we its fruits must see.
17. The squirrel hastens to and fro,
With acorn, nut, and corn,
His cell to fill; he's much to do,
For winter's coming on.
- In concert.*—Lay up a store of luxuries rare,
To feast the mind upon;
Undaunted, then, you'll have no fear,
When wintry age comes on.

WHO ?

[We gave the pseudonyms last month, and now add the real names.]

Boz.	* Charles Dickens.
Christopher North.	John Wilson.
Chrystal Croftangry.	Walter Scott.
Lawrence Templeton.	Walter Scott.
Currer Bell.	Charlotte Bronte.
Edward Search.	William Hazlitt.
Elia.	Charles Lamb.
George Eliot.	Mrs. Marian L. Cross.
George Fitzdoodle.	Wm. M. Thackeray.
Isaac Bickerstaff.	Jonathan Swift.
M. B. Drapier.	Jonathan Swift.
John Gillford.	John R. Green.
Junius.	Sir Philip Francis (probably).
Martinus Scriblerus.	Alexander Pope.
Mathew Bramble.	Andrew MacDonald.

Mrs. Margaret Caudle.	Douglas Jerrold.
Nestor.	Sir Richard Steele.
Owen Meredith.	Edward R. Bulwer.
Parson Lot.	Charles Kingsley.
Peter Plymley.	Sydney Smith.
Philisides.	Sir Philip Sydney.
Pisistratus Caxton.	Edward G. Bulwer-Lytton.
Pisistratus Brown.	William Black.
Artemus Ward.	Charles F. Browne.
An American Girl Abroad.	Miss Trafton.
Boston Bard.	Robert S. Coffin.
Brick Pomeroy.	Mark M. Pomeroy.
Christopher Crowfield.	Mrs. Harriet Beecher Stowe.
Geoffrey Crayon.	Washington Irving.
E. D. E. N.	Mrs. Southworth.
Edmund Kirke.	James R. Gilmore.
Eli Perkins.	Melville D. Langdon.
Elizabeth Wetherell.	Susan Warner.
Fanny Fern.	Sarah Payson Willis Barton.
Frank Cooper.	W. Gilmore Simms.
Gail Hamilton.	Miss Mary Abigail Dodge.
Grace Greenwood.	Mrs. Sara J. Lippincott.
Hans Brietmann.	Charles G. Leland.
Ik Marvel.	Donald G. Mitchell.
John Phoenix, Gentleman.	George H. Derby.
Josh Billings.	Henry W. Shaw.
Major Jack Downing.	Seba Smith.
Marion Harland.	Mary Virginia Terhune.
Mark Twain.	Samuel L. Clemens.
Max Adeler.	Charles H. Clarke.
M. Quad.	Charles B. Lewis.
Mrs. Partington.	B. P. Shillaber.
Old Bachelor.	George William Curtis.
Orpheus C. Kerr.	Robert H. Newell.
Paul Creyton.	John T. Trowbridge.
Penholder.	Edward Eggleston.
Petroleum V. Nasby.	David Ross Locke.
Private Miles O'Reilly.	Charles G. Halpine.
Timothy Titcomb.	J. G. Holland.
Agate.	Whitelaw Reid.
A. L. O. E. (A lady of Eng.)	Charlotte Tucker.
Bret Harte.	F. B. Harte.
Buffalo Bill.	W. F. Cody.
Carleton.	C. C. Coffin.
Danbury News Man.	J. M. Bailey.
Diedrich Knickerbocker.	Washington Irving.
A Fat Contributor.	A. M. Griswold.
Gath.	G. A. Townsend.
Henry Castlemon.	Charles Fosdick.
H. H. (Helen Hunt).	Mrs. Helen Jackson.
Hugh Conway.	F. J. Fergus.
Jean Paul.	Jean Paul Richter.
Joaquin Miller.	C. H. Miller.
Joshua Coffin.	H. W. Longfellow.
Lemuel Gulliver.	Jonathan Swift.
Oliver Optic.	W. T. Adams.
One of the Fools.	A. W. Tourgee.
Ouida.	Louise de la Rame.
Peter Parley.	{ S. C. Goodrich.
Poor Richard.	{ William Martin.
Porte Crayon.	Benjamin Franklin.
Robinson Crusoe.	D. H. Strother.
Rob Roy.	Daniel Defoe.
Sam Slick.	John MacGregor.
Sophie May.	J. C. Haliburton.
Tom Brown.	Miss R. S. Clarke.
Ned Buntline.	Thomas Hughes.
Dunn Browne.	E. Z. C. Judson.
Q. K. Philander Doesticks.	Rev. Samuel Fiske.
Hosea Biglow.	Mortimer N. Thompson.
Carl Benson.	James Russell Lowell.
George Sand.	Charles Astor Bristed.
Fanny Forester.	Mme. Amantine Dudevant.
Howard Glyndon.	Mrs. Emily Judson.
Daisy Howard.	Mrs. Laura C. Searing.
Margaret Sydney.	Myra Daisy McCrum.
Ester Converse.	Mrs. D. Lothrop.
Thomas Ingoldsby.	Mrs. J. T. Clarke.
Jennie June.	Richard Harris Barham.
Minnie Myrtle.	Mrs. Jennie C. Croly.
Louisa Mühlbach.	{ Anna L. Johnson.
K. N. Pepper.	{ (Mrs. Joaquin Miller.)
Florence Percy.	Mrs. Clara Mundt.
	J. W. Morris.
	Elizabeth Akers Allen.

[Written for THE AMERICAN TEACHER.]

THE CLOSE OF DAY.

N. LINCOLN.

Andante. ♩

The day is past and - o - ver, I lay me down to
[D.S.] pray Him to a - wake me At ear - ly morn-ing's

2nd time, go to Coda.

sleep; May An-gels round me hov - er, And from all dan - ger
gleam, And when I die, to take me To dwell in heaven with

2nd time, go to Coda.

First time only.

keep, And from all dan - ger keep. I thank the bounteous

Giv - er For all His gifts this day, And pray, and

D.S.

pray that I may ev - er His care and love re - pay. I

CODA. To dwell in Heaven with Him.

Him, To dwell with Him.

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

305. Has the true source of the Nile been found? If so, where, and by whom? MARY KILGORE RAMEY, *Brick Store, Va.*

The true sources of the Nile have been found by Capt. J. H. Speke and Capt. J. A. Grant, 1860-1863, and Sir Samuel Baker, March 14, 1864. The sources of the Nile are (1) the Lake Albert Nyanza, whose outlet is the White Nile; (2) the junction of the Aleai and Dedhesa rivers about latitude $30^{\circ} 30'$ north, which form the Blue (true) Nile. These rivers, the White Nile and the Blue Nile, unite near the city of Khartoom in the Egyptians' province of Soudan, in latitude $15^{\circ} 36'$ north, and latitude $32^{\circ} 38'$ east.

310½. Give a recipe for making a good copying pad.

Soak 6 oz. of broken gelatine in cold water until it is quite flexible. Drain off all the water. Heat the gelatine until it melts. Add one pound of glycerine. Thoroughly mix the two kept hot (a little below the boiling point). Pour into a pan and allow the mixture to set (in the cold). Fit to use in 24 hours. In using, thoroughly sponge the surface and dry with sheets of paper before applying the written sheet.

316. Who invented decimal fractions?

Decimal fractions were introduced so gradually that it is exceedingly difficult, if not impossible, to assign their origin to any one person. In a work published in 1525 by a French mathematician named Orontius Finius, we find the earliest indications of the decimal idea. So near as can be ascertained, he was the inventor.

C. G. K., *Inwood, Iowa.*

318. Which is the longest word in the English language?

Incomprehensibility is the longest word in the English language.

P. B., *Washington C. H., Ohio.*

319. Why is buckwheat so called?

"Buckwheat" is a corruption of Beechwheat, from its resemblance to the mast of the Beech. *Ibid.*

320. When and by whom was the Declaration of Independence written?

By Thomas Jefferson; published to the world July 4, 1776. On the 7th of June R. H. Lee offered a resolution in Congress "that these colonies are, and ought of right to be, free and independent states."

L. B. H., *Bingham, Ohio.*

Credit to G. B., Texas.

321. What is the Golden Number of a year, and how determined?

The Golden Number of a year is the year of the Metonic cycle it represents. The Metonic cycle consists of 19 years, and is reckoned from 1 B. C. Hence, add one to the date and divide by 19; the quotient is the number of cycles elapsed and the remainder the Golden Number.

P. B., *Washington C. H., Ohio.*

Credit to G. B., Weimar, Texas.

322. Give the text of the Ordinance of 1787.

The most important act of the last Continental Congress was the organizing of a settled government for the territory north of the Ohio River. It was in fact the most "notable law ever enacted by the representatives of the American people," and to insure its perpetual enforcement it was not left as an act of Congress which could be repealed at any subsequent session, but its six main provisions were made articles of a solemn compact between the inhabitants of the territory, "present and to come," and the original states. Provisions: (1) No man was to be restricted of his liberty, except as punishment of crime; (2) life, property, and religious freedom were protected by law; (3) religion, morality, and knowl-

edge being necessary to good government, schools, colleges, etc., shall be forever encouraged. One section of land in every township was set apart to support common schools, and two entire townships for the establishment of a college. L. B. HAYWARD.

323. What were the terms of the treaty of 1783?

On Sept. 3, 1783, a definitive treaty was signed at Versailles, France, by which the United were formally acknowledged by Great Britain to be free, sovereign, and independent.

Great Britain acknowledged the independence of the United States, agreed to the great lakes on the north and the Mississippi on the west as boundaries, and conceded the right to fish on the banks of Newfoundland.

G. B., *Texas.*

QUERIES.

352. What advantage in spelling words by sound? Will it improve or injure the pupil's orthography? Give reasons.

353. Why does the city of Tokio burn down every seven years?

354. Analyze the sentence, "There came to the beach a poor exile of Erin." How would you parse *there*?

355. What is the name of the island in the Mediterranean Sea which is known as the "Light House"?

356. Should a person attempt to teach drawing without special training for the work?

357. Why are not the vowels in all the syllables of words alike indicated by diacritical markings? Show this by five illustrations of distinct cases, with their needful explanation.

358. In pronouncing unfamiliar words, state the guiding laws by which we may determine the location and pronunciation of the accented syllables without reference to the dictionary. Illustrate.

359. Suggest ten prominent classes of divergences between English orthography and its orthoepy, where reform appears most feasible.

360. Give the classification of twelve suffixes, according to the part of speech represented.

361. Give a list of ten compound words in which the spelling varies from the component parts, and account for the change.

362. What are the essential things in etymology to be taught pupils in common schools? at what age and by what methods can these be most advantageously impressed? Give reasons for statements.

363. Place the word "only" in three different positions in a sentence, and explain the change of thought expressed.

364. Define a decimal fraction and show its excellences and defects as an instrument of computation, by statement and example.

365. Is *reduction* in computation, a *convenience* or *necessity*? Sustain your statement and explain why so much attention is devoted to it in teaching arithmetic.

366. Has the invention of *percentage* added any to the scope of arithmetical computations? Explain. State the field of its application and its especial advantages.

367. How long must a rectangular piece of land be, containing 3 acres, if its width be $\frac{1}{2}$ of its length?

368. Given the contents of a rectangular solid, and two of its dimensions: required the third. Explain in strict accordance with your definition of *division*.

369. Adding the same number to both terms of a fraction produces what effect upon its value? Explain why this should be so.

370. Required to add $\frac{1}{2}$ to $\frac{2}{3}$ and to multiply $\frac{2}{3}$ by $\frac{1}{2}$. Explain fully why in one case it is necessary to reduce to a common denominator and not in the other.

371. In a mill are employed men, women, and boys. Men work 12 hours a day and receive 6 cts. per hour. Women work 9 hours a day and receive 4 cts. per hour. Boys work 8 hours a day and receive 3 cts. per hour. As often as all the men earn \$24, all the women earn \$10, and all the boys \$5. There are 59 employed. How many are men? how many are women? how many are boys?

372. A hall is twice as wide as it is high (inside measure), and $1\frac{1}{2}$ as long as it is wide, and contains 248,832 cu. ft. How many square feet of floor surface? How many sq. yds. of paper will it take to cover the walls, no allowance being made for doors and windows?

373. Three numbers are to each other as 1, 3, 5; their product is 32,955. What are the numbers?

374. What is the true source of the Mississippi River? A. P. G.

THE KINDERGARTEN.

DURING earliest months of a child's kindergarten life, the kindergartner should strive to place herself in the relation of mother to the little one who feels greatly the change from familiar home surroundings to the new atmosphere of the kindergarten. A young teacher once said: "The highest token of my power with children came when a wee child nestled up to me, saying in tones full of love, 'Mamma, what shall I do next?'"

BUILD up and help development; avoid any exercise that will hinder natural growth, or destroy the wakening powers of a child to do and be. Lead the child to aspire, then he makes the effort to do; real aspiration will end in action. Instinctively the child will try to develop himself harmoniously; therefore, aid his thought, will, and feeling, to purer development, thus strengthening the power with which Nature endows him.

Behind every manifestation the child must feel a force; in his earliest experiences in the kindergarten let that force be of the simplest and purest, otherwise a warped, imperfect development will manifest itself.

WORKERS in private kindergartens are able to begin at once with the mental development of their small charges, while those in charity classes are forced to delay everything until the crudest lessons in language have called out a power to begin mental development. Beginners there are, and many too, forced to teach their pupils the meaning of "stand up," "sit down," "move chairs," "clasp hands," and the numerous common phrases constantly in use among young pupils. Very disheartening it seems during the first months, but after several have passed, what a satisfaction is experienced as every child responds intelligently to all demands, or directions from the kindergartner.

PARENTS, kindergartners, and primary teachers will rejoice that at last we have a book of songs, games, and rhymes adapted for the home, kindergarten, and primary school, with admirable notes and suggestions for their proper use, by a lady who has earned an American reputation in elementary work second to none on this continent, Mrs. Eudora L. Hailmann, of La Porte, Ind. The cultivation of the music sense should begin in earliest childhood, and be directed with great wisdom. No agent is more effective in training the feelings of the young than music, and the expression of their emotions in rhythm is as natural as a desire for play. We cannot too strongly urge upon teachers the importance of cultivating a musical taste that is elevating and pure. The moral nature is greatly influenced by the songs of the children. Reverence, conscientiousness, enthusiasm, and order may all be learned from the songs, games, and plays of the kindergarten.

NOTES FROM A KINDERGARTNER'S NOTE-BOOK.

THE first day, usually a dreaded one to kindergartners, ran into the past, leaving a satisfied feeling of good work begun, simply because every detail had been carefully planned and thoroughly considered so long beforehand that all was easy of accomplishment when the strain really came. Our room had been made homelike by the replacement of decorations and necessary furniture, and all about playthings were arranged in so inviting a manner the most rebellious or homesick little one could not fail to be attracted.

On the first morning the assistant, waiting at the entrance, made welcome each parent, who, entering the room, gave to the principal the information necessary to admittance. These particulars registered, the little one was taken in charge by the nurse, who introduced him to a child group already engrossed in happy play among the playthings. When the last entry was registered, the assistant took her place at the piano, while the principal, with the nurse's aid, gathered the children about them to play ball with a rubber ball, to the rhythmic music from the piano.

Next came a marching exercise, very straggling despite many of the "little soldiers" had been members of the previous year's class. So much had been forgotten during the lawless street life of the summer holidays that we all realized the struggle to come before the miniature men and women would be in condition to receive that which was to be given them.

Following the marching was a "rising and falling" game; that is, the children rose to a full height, and sinking again, sat upon the floor, saying meanwhile, "Now we're standing, now we're sitting." After this, luncheon (that brought by the children, and soda biscuit furnished by the teachers) was served at the table. Though demure and quiet enough while at table, our small people became decidedly restless beneath the application of the soap and water between the luncheon hour and story-telling, which was conducted by the principal, who, seating herself, drew the children close about her, in many senses.

A picture of the Sistine Madonna made a basis for the story in which a great interest was taken. The Child, or "Baby," became the centre of interest, since nearly all the children had a baby sister or brother at home, and in a tactful way the little people were led to talk about these home babies before the principal told a story about a baby of whom she knew. This particular baby was not small as the one in the picture, but could move about the room and take things in her — what? Hands and fingers, to be sure. And had the home babies hands and fingers, too? Yes; and so have all *these* little children hands and fingers. This being the point at which it was desired to arrive, the children were directed to hold up the hands and display thumbs and fingers. The principal then sang

to a gentle piano accompaniment, "This is the mother, good and dear" (from Mrs. C. B. Hubbard's collection of songs). She sang many, many times, illustrating with any little hand that was volunteered.

The singing ended, another marching exercise was enjoyed by all save one stout little fellow who had sobbed himself to sleep in the nurse's arms despite her conscientious endeavors at entertainment. By this time the hour for closing was nearing, so the little folks were seated about a crescent, made ready to go home, and given a bunch of golden-rod blossoms to give to the baby at home.

A MORNING TALK IN KINDERGARTEN.

BY M. L. VAN KIRK.

ONE morning early in October I went to visit Miss Miller's kindergarten. The children were seated in a ring, and there was an air of repose and happiness about them that I liked. They were singing "Good Morning" to each other. After this Thumb and Fingers bowed and the "Good Morning" song to them was sung. Little conversations followed about the strong middle-finger and the weak ring-finger, which made me feel this finger game was a real thing to them. Harry said: "Miss Miller, can we sing 'Good Morning to Meadow and Hill'?" Then followed that beautiful song,—

"Good morning, good morning to meadow and hill;
Good morning, good morning to valley and rill."

I was glad to hear the sweet, low voices of these children, and when they came to the words, "The shining leaves *whisper*," they sang them in a confidential way. The children enjoyed this song about nature. Two or three led the action part of it, Miss Miller following them in the gestures. The children sang as if they pictured to themselves the scenes the words suggested. It was evident that they were led to observe nature in this kindergarten, for the remembrance of the summer was so vivid that each child had something to tell about the mountain, or the sea, or wherever they had been.

There was a little table in the center of the ring, and a plate upon it and a covered basket under it. This was one of Miss Miller's ways of having something new to talk about. Little eyes would be eagerly looking at the basket, and they were not kept waiting long, for a little boy was asked to bring the basket, and the contents were taken out and an oyster in the shell was placed upon the plate, and some empty shells laid upon the table. Everybody was so glad to see this oyster, for they all loved the sea, as it had been talked about before. Now this oyster was a fine large one. A little tot carried the plate around and Miss Miller raised the upper half of the shell to show the little fellow inside. Each child looked at him, and touched him, and Miss Miller then raised up the little flap in the oyster so the children could see the little ruffles where he breathes when he lies fastened to the rock or to

some other oyster down in the sea, with his shell open, and a stream of water gently flowing over him. Jane said, "Do oysters eat anything?" Oh, yes; this water goes right to his mouth and little tiny plants and animals go with it, and he swallows them. He has no trouble in getting plenty of food, my dear children, but he has much trouble in taking care of himself. When he is very young he swims away with a shell so thin you can see through it; and if he gets near some hungry fish they will swallow him, just as he swallows those little animals in the water when he gets larger.

"Can he see those hungry fish when he is so small?" asked a child. Yes, he has two little red eye spots, and he can see with them, and keeps out of the way, until he fastens himself to a rock; then his little eyes go away, for he does not need them any more. "With what does he build his shell?" says another child. There is lime in the sea, and he takes it out of the water, right into his body, and slowly builds up a solid house. "Yes," said Mary, "we had some mortar put into our house with lime in it. Father told me it was very strong, and held the bricks together." How wonderful this *dear* oyster is! While he is building his shell, so firm and strong, he has to keep all these hungry fish away. The oyster is now laid upon the table again, and the shells are taken by the children, and they relate what their fingers told them of the rough outside and the smooth inside, the cup-shape of the largest part of the shell, and the flat face of the smaller one. Then Susie finds the hinge which is so strong, and says, "I suppose he can shut up this shell when he wishes to." Yes, he can; and I will tell you a story about a funny little fellow another day, which some one gave to me; and the oyster shells were quietly placed in the basket, the plate with the oyster upon them, and all prepared for a march.

SEAT OCCUPATIONS.

BY ANNA A. KIMBER,
Superintendent Model School, Indiana, Pa.

Part II.

THE child may string beads. At first the beads should be alike in size and color. Later they may be of alternating sizes or colors, or both. A system being adopted which will cultivate attention and memory and help fix the facts learned in number work. Thus one bead may be white; two blue ones may follow, and the order be repeated. It is evident that the variety of exercises may be very great, that the complexity of work may be made to depend upon the power and acquisitions of the child, and that taste may be cultivated by allowing the children to select the combination of beads which they will use.

The children may put together dissected pictures. The pictures should themselves be simple, containing few features, and be of such a character as to be worthy of close

attention and study. The relation of the parts of a thing to the whole, the exact forms and external characteristics of various birds and animals, together with the marked difference between those of different kinds, will thus be easily and unconsciously learned.

Let the children arrange geometrical forms cut from colored cardboard to correspond to forms given on a form or color-chart. Such a chart can be prepared by any teacher. Appreciation of forms, their similarities, their differences, the ways in which they may be most effectively combined will be learned. Quick discernment of color, the ability to place together such selected colors as will harmonize will result.

Shoe pegs or splints may be laid in various positions. Judgment, exactness, and thoughtful care will be cultivated in this.

Tracing about cut cardboard forms of animals, flowers, or fruit, will be found very instructive. Technical skill in the use of pencil and paper or other materials used, together with long experience and much practice are prerequisites for artistic work in drawing. Such exercises as

this will give ideas of forms, give them accurately and add to them the actual use of the hand in reproducing them.

The children may copy a line consisting of some one character, each to touch both head and base lines on the slate. The children may copy with reference to number, one of a kind, two of a kind, two of the next, and then repeat. It will be noticed in all these exercises as many of the child's powers are reached and made active as possible.


Place a limited number of sticks in all possible combinations. Draw a picture of each, first on a slate for practice, later on paper for preservation. Original pictures or designs may be drawn. Cards may be embroidered. Sticks may be arranged at given angles. Plans of the room or rooms at home may be drawn. Pea work furnishes a great variety of fascinating and useful exercises. Colors may be selected, compared, and classified. Designs may be made of geometrical forms, and then made permanent by pasting on cardboard or paper. Papers may be folded into various forms. Leaves may be gathered and copied. The parts of an object may be drawn, and afterward the object itself. Many exercises in reproduction of work can be assigned. The above are examples.

ALL who feel tired or languid, and become easily fatigued, and have not energy to apply themselves to study; all who find it difficult to learn their lessons or remember them; all who are *nervous*, especially those who are peevish and sleep badly; in short, all whose brains and nerves require strengthening will be restored to mental and bodily vigor and cheerfulness by CROSBY'S VITALIZED PHOSPHITES. It gives bright new life and health to the brain and nerves in old or young.

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FROEBEL'S PRINCIPLES AND THEIR PRACTICAL APPLICATION.

BY FLORENCE CLAP, BALTIMORE.

EDUCATION consists in developing the faculties and powers of the mind of the child. Instruction consists in imparting knowledge. Therefore education precedes instruction. The child enters the world. It possesses a body, a mind, and a soul. It has, therefore, a physical, mental, and moral nature to be educated. Its first expression of life is movement, spontaneous, unreflecting. It feebly moves its hands and limbs; it cries. Very soon it will look; will turn its head to follow a moving form. This is the first appearance of mind. It hears; will turn to locate a sound. It smiles, which is the first indication of the soul. The first few years of its life is necessarily one of undirected and natural motion. But in its efforts it points unmistakably to its needs. It incessantly uses its hands. It is not content to look at an object; but it must handle it, taste it, break it. It grasps everything within its reach. Therefore we must conclude that the hands are important factors in the child's education. The cradle songs of all nations are not accidents. They developed from a first need of infancy; namely, movement, the pleasure of which is intensified by rhythm. Color attracts the child and at once suggests its part in the child's education. We have then displayed very early three marked inclinations,—activity; enjoyment of activity

enhanced by rhythmical sounds, or music; appreciation of color. It is not long before the child wishes to be a part of the world about it. It imitates in its play life that it is in the midst of. Its first intelligent demand is, "What shall I do?" This question it refers to us for the solution.

We must, therefore, place within the child's reach that which will enable it to employ its activities and develop its resources. It must be given proper material. Its efforts must be directed. Its self-activity must be cultivated. Its physical needs must be considered. Its relations to the world must be taught by social intercourse with others of the same age.

The child's first conceptions are naturally simple. The history of the human race shows this to be a fundamental law. The primitive efforts of mankind serve for first urgent needs. In other words the child advances, as the human race, from the knowledge of the concrete to the abstract; from the known to the unknown; from the simple to the complex; from the whole to the parts.

The child can perceive the law of contrast from the round to the square, from the curved line to the straight. It can distinguish between up and down; it detects differences of color. Therefore, form, motion, color can be emphasized to it.

True the child must demonstrate whether it comprehends form, motion, color. It thus makes its first effort to proceed from the concrete to the abstract; it expresses its idea; it develops itself. This is self-activity in the full sense of the word, for the child is now directed by its mind, and is obliged to carry out its ideas.

(To be continued.)

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FACTS.

GROUPS OF CITIES FORMING PRACTICALLY ONE GREAT COMMERCIAL CENTRE, AUGUST, 1887.

New York,	1,450,000	} 2,395,000 (second largest in the world).
Brooklyn,	720,000	
Jersey City,	165,000	
Hoboken,	40,000	
Long Isl'd City,	20,000	
Boston,	404,000	} 537,000 (fourth largest in U.S.)
Cambridge,	63,500	
Somerville,	32,000	
Chelsea,	27,500	
Brookline,	10,000	
Cincinnati,	290,000	} 352,000
Covington,	34,000	
Newport,	28,000	
Louisville,	145,000	} 173,000
New Albany,	17,000	
Jeffersonville,	11,000	
San Francisco,	292,000	} 340,000
Oakland,	48,000	
Pittsburg,	186,000	} 281,000
Allegheny,	95,000	
Minneapolis,	165,000	} 307,500
St. Paul,	142,500	
Kansas City,	150,000	} 175,000
Wyandotte,	25,000	
Manchester,	376,895	} 588,136 (in 1886)
Salford,	211,341	
Elberfeld,	106,492	} 209,657 (in 1885)
Barmen,	103,165	

— *Fisher's Essentials of Geography.*

PUBLIC OPINION.

— Education is the leading of human souls to what is best, and making what is best out of them. — *Ruskin.*

— There is no book worth reading at all which will not suggest some matter of interest, or refer to some subject which it might be a satisfaction to pursue. — *St. Louis Republican.*

— A boy who has learned to draw can never again make quite so bad a drawing as in his studies; and drawing, be it observed, opens wide the door to all mechanic arts. — *N. Y. Times.*

— Education may well be compared to a certain species of writing-ink, whose color, at first, is scarcely perceptible, but which penetrates deeper and grows blacker by age, until, if you consume the scroll over a coal fire, the characters will still be legible in the cinders. — *Horace Mann.*

— If the teacher would grow he must use the means of growth. He must associate with his fellow-teachers and discuss with them the principles which underlie all true teaching and all true discipline; he must make himself familiar with all that marvel of marvels,—the human mind, and the laws which govern its growth; and he should make a constant study of the methods by which instruction can be most effectively given to the child. — *Supt. John McDonald.*

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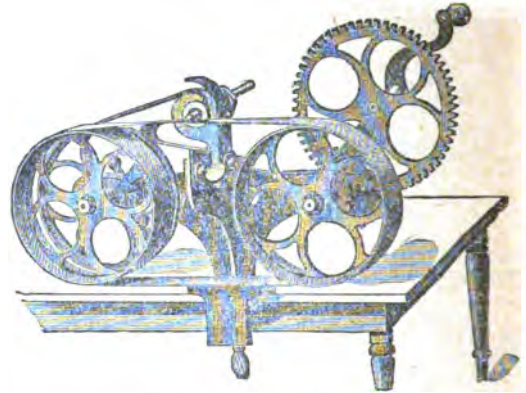
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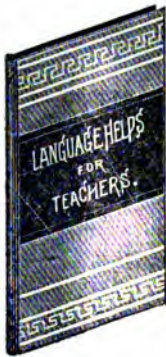
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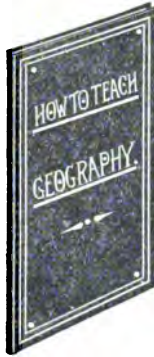


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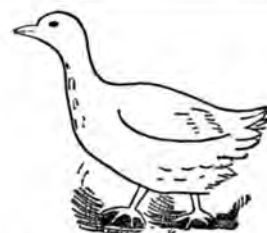
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AMERICAN TEACHER.

SUPPLEMENT.

A. E. WINSHIP, }
W. E. SHELDON, } *Editors.*

BOSTON, OCTOBER, 1887.

Price, \$1.00 per year.
NEW ENGLAND PUBLISHING CO.,
3 SOMERSET ST., BOSTON.

FLUFF.

BY IDA F. B.

HE TAKES AN EXCEPTION.

Snooks will "take" almost anything,
Your money or your life.
Nay, even insults he will take,
And will not stir up strife;
But fun at him you need not poke,
You cannot make him take a joke.

The speech of all the well-disposed
No speck of malice taints.
They say "she changes countenance"
Instead of that *she paints*.

A woman who has long been bedridden may be called a person of *extended experience*.

In castigating a boy remember that the discipline involved is not *sound* unless it can be *heard*.

Men have a good deal to say about the *sphere* of woman, but, were it not that they are anxious that she should be contented with it as it is, it is doubtful whether they would call it at most more than a *hemisphere*.

Something a woman is apt to have a hand in—A number six *glove*.

Much to be pitied (*pitted*)—A bushel of ripe cherries.

Foul weather is best to catch a *duck in(g)*.

"Truth is stranger than fiction." *Very much* more of a stranger to some persons.

A home thrust—When your hostess yawns.

A good many wives think that *all* holidays ought to be called "Labor Day," it is so hard to keep their husbands out of mischief.

Many a "camper-out" is now giving sighs of relief that his hard work is over till next summer.

The "Oblate Fathers" of Lowell have petitioned the school committee to furnish their parochial schools with free text-books. Do the "Oblate Fathers" think that the "City Fathers" also are *oblate* (flattened at the polls)?

We have heard of the feats artists can perform with one line, but they are nowhere compared with the metamorphosis a printer can make in a sentence with one dot or one letter. The miserable paragrapher ought to end all his contributions with this legend: "To the printer belong the *spoils*."

Books by Charles Reade: For a tired mother at 11 P. M., "It is Never too Late to Mend." For an office-seeking politician, "Put Yourself in His Place." For a base-ball umpire, "Foul Play."

In these days of women's clubs almost any child can answer the question of the song, "What is home without a mother?" We notice there is no song entitled "What is home without a father?" That would have been too easy, probably.

Fashions return periodically, so that it is not much matter if a dress is old, provided it is old enough not to be recognized; but bear in mind that some women's memories are strongest on the *sint* of other women's old clothes.

MODERN METHODS IN ARITHMETIC.—(I.)*

BY A. E. WINSHIP.

IN answer to numerous appeals from many sources for a definite presentation of the modern methods in arithmetic, so simplified and arranged as to be applied by any teacher, whatever her preparation, I attempt such a service. No one is better aware than myself that I have not followed the "high ideal," but have sought rather to give a working program, based upon what I believe to be sound principles applied in a common-sense way.

PREPARATORY WORK.

Assume that the little people when they enter the primary school know numbers as high certainly as five. Nine out of ten of them unquestionably have this knowledge. Make no formal attempt to teach these first numbers. But they may not know their combinations, and I shall call attention under "First Lesson" to the order in which they may be taught in forming a habit of work in dealing with higher numbers which they may not know.

The first work in numbers, as in language, is to have the children talk freely under the direction of the teacher.

Furnish them objects that will make only a natural draft upon their imagination, objects about which they can talk readily. Do not give them spools, or sticks, or horse-chestnuts, and ask them to imagine them to be bananas, rabbits, or men. In doing so the result is tedious sameness except in the case of two or three imaginative geniuses.

At slight cost they can be provided with little iron, tin, or lead utensils, or wooden animals, such as hoes, forks, shovels, rakes, spades, flat-irons, dishes, horses, cows, dogs, sheep, and soldiers. Give them but one class of objects at a time, and only introduce a new one when it is needed to stimulate thought and produce fresh interest. The best of objects in their seasons are twigs, buds, blossoms, such as daisies, pansies, or dandelions.

If possible have special tables for the use of these little folk. Many schools, indeed all schools where the authorities regard the importance of modern methods, have such tables already. The best table is about ten feet long and four feet wide, marked off by little beads into five divisions on either side, with five little apartments set off

* Copyright, 1887.

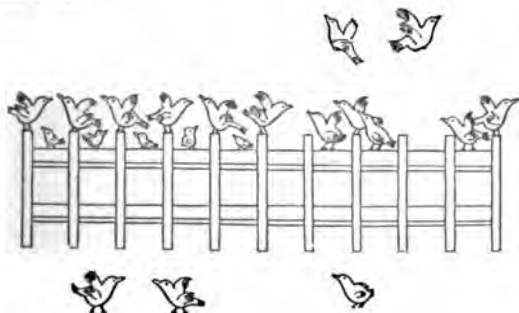
THE ILLUSTRATIVE ELEMENT.

(Editorial account of observations in the best primary schools.)

IT is difficult to impress teachers with the value of picture-making in connection with number lessons. The end aimed at is absolute certainty that the child is right in his processes, that he knows he is right, that he makes the processes his own literally. Every teacher knows how next to impossible it is for some children ever to solve a problem in arithmetic. Mental arithmetics have done the world a service of which poets ought to write, but even those stimulating books, that have made brains for thousands, by developing skill in solving problems, would help some children much more if in the earlier work the habit of grasping problems was learned by more illustrative work. Modern methods teach the child to invent some illustration that shows the true inwardness of the problem.

The work must begin where the child knows the fact before he illustrates it. He must be taught at first to *illustrate what he knows*, after which he leads himself to learn from these illustrations what he else might not know. The time of recitation is never used for illustrative work, but merely the study time is given to it. It keeps the child busy. It furnishes a habit of making pictures with a purpose. The teacher does not assign a lesson for illustrative work, does not ordinarily give questions to be illustrated, or problems to be solved. She merely tells them to see what they can illustrate during the study time. In case they cannot represent the objects by pictures they may be allowed to represent them by any marks to illustrate the number-work.

In one school we saw a little fellow with this drawing. We reduce it in size, but with him it took the whole length of the slate.



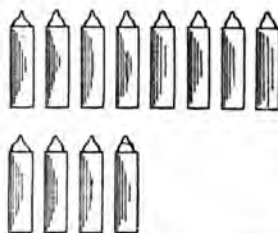
On the slate below it were these figures:

$$21 - 5 = 16.$$

We asked what it all meant, and the little fellow told us, with much pride, that there were twenty-one birds on a fence, and five flew away, and then there were sixteen left.

Out of that picture-making he had been fixing a habit of illustrating his work; had the material for good language practice; had been happy; and his number-work was play for him.

We saw another little child illustrate this example in this way: if you get 8 candles for a pound, how many candles will you get if you buy $2\frac{1}{2}$ pounds? $8 + 8 + 4 = 20$.



The aim of the teacher from the first should be to tell the child little, if anything, about what he is to do or how he is to do it. He does not aim to have him do it in the shortest or the best way, but to find out

a way for himself to illustrate a solution of his own making. There is no disposition or desire to have him go any faster than he can think it out for himself. Teachers are apt to lack courage, and not trust the brains of the child. There is almost no danger of crowding them if they be given time enough and use their own ingenuity.

WAND GYMNASTICS FOR GIRLS.*

Part II.

SIXTH MOVEMENT.

POSITION.—Right hand extended, wand horizontal, knuckles down.

Exercise A.—(1) Turn hand half-way, knuckles forward, wand perpendicular; (2) return. Repeat, 8 counts.

B.—(1) Turn hand forward and over, knuckles up, wand horizontal; (2) return. Repeat, 8 counts.

C.—(1) Turn hand forward sidewise, keeping knuckles down, the wand remaining horizontal, but at right angles with previous position; (2) return. Repeat, 8 counts.

SEVENTH MOVEMENT.

Position.—Hands at side, right hand holding the upper end of the wand, which nearly touches the floor.

Exercise A.—Same as the first movement, except that the hand is carried in a diagonal, midway between the side and the front.

B.—(1) Carry right hand out and up at the side to the horizontal; (2) carry it on a horizontal forward to the diagonal; (3) carry it up to the perpendicular; (4) bring it down to the horizontal, but at front; (5) carry it sidewise on the horizontal to the diagonal, and pause; (6) continue to carry it sidewise to the side; (7) return to position; (8) rest. Repeat.

EIGHTH MOVEMENT.

Position.—As in Fifth Movement, wand in front, hand at each end.

Exercise A.—(1) Carry the wand to the left, left arm horizontal, right arm crossing the body, wand at angle of

* Based on an exercise witnessed at the Franklin School, Boston, G. B. Putnam, master.

45°; (2) return. Repeat, 8 counts.

B.—Same to the right.

C.—(1) To the left; (2) return; (3) to the right; (4) return. Repeat.

D.—(1) To the left; (2) to the right without stopping at position, but pausing definitely when in either the left or right position. 8 counts.

NINTH MOVEMENT.

Position.—As in the Fifth and Eighth, careful that the heels are together, the feet forming an angle of 45°, weight on left foot.

Exercise A.—(1) Carry right foot back a few inches, without bending either knee, placing right foot flat upon the floor, wand unmoved; (2) return. Repeat, 8 counts.

B.—Same with left foot.

C.—Alternate (1) and (2) with right; (3) and (4) with left, etc.

D, E, and F.—Same as *A, B, C*, except that the movement is directly forward.

TENTH MOVEMENT.

Position.—As in the Ninth.

Exercise A.—(1) Carry the right foot back a few inches without moving the body or the left limb, touching only the toe of the right foot, at the same time carrying the wand forward to an angle of 45°; (2) return foot and wand; (3) foot back, wand forward to the horizontal; (4) return; (5) foot back, wand forward to 135°; (6) return; (7) foot back, wand up till the arms are in perpendicular position; (8) return.

B.—(1) Carry the right foot out to side, without moving body or left limb, touching only the inside of the toe to the floor, at the same time carry the wand to the left until the left arm is horizontal and the right crosses the body; (2) return. Repeat, 8 counts.

C.—Use left foot as in *B*, carrying wand to the right.

ELEVENTH MOVEMENT.

Position.—As in Seventh Movement, hands at side, right hand holding upper end of wand.

Exercise A.—(1) Carry left foot back diagonally, quickly, bending right knee slightly, body erect, at the same time with equal promptness carry the wand forward and upward in the right diagonal to an angle of 135°; (2) return. Repeat, 8 counts.

B.—Same as in *A*, except that the right foot goes back, and the right arm crosses the body, carrying the wand to the left diagonal same angle.

C.—Same, left foot going directly to the side and the wand going directly to the right side, at an angle of 135°.

D.—Charge forward with the right foot at diagonal carrying the wand to the right horizontal, diagonal at the same time.

E.—Charge forward with left foot, carrying the wand to the left horizontal diagonal.

TWELFTH MOVEMENT.

Position.—Hands at side, right hand holding lower end of wand, which rests against the side in perpendicular position.

Exercise A.—(1) Carry right hand with wand promptly, energetically across the body, touching left chest, wand being perpendicular beside the head; (2) return. Repeat, 8 counts.

THE DISTINCTION BETWEEN PERSONAL AND RELATIVE PRONOUNS.

BY FRANC E. OLIVER.

SUBJECT MATTER.—A personal pronoun is one that shows its person by its form. A relative pronoun is one that gets its person from its antecedent.

Method of Development (in outline)¹: Review pronoun and antecedent, getting from the children by question and answer the following: That a pronoun is a word that stands for or is used in place of a noun, that the noun for which the pronoun stands is called the antecedent of the pronoun; that pronouns, since they in every way fill the office of nouns, have the same properties and relations; that the properties of the pronoun are person, number, and gender, and the one relation is case; that "person" is that property of a noun or a pronoun which shows whether the first, second, or third party is represented.²

Let any child suggest a pronoun. Child suggests *he* and the teacher writes it upon the blackboard, numbering it 1, and so on until at least twelve pronouns have been written in order, thus:

- | | | |
|----------------|-----------------|--------------|
| 1. <i>he</i> | 4. <i>I</i> | 7. <i>my</i> |
| 2. <i>they</i> | 5. <i>it</i> | etc., etc. |
| 3. <i>who</i> | 6. <i>which</i> | |

After the list is completed, begin with 1, questioning substantially thus:

What part of speech is *he*? A Pronoun.

Give the properties of *he*. Third person, singular number, masculine gender.

Why has *he* third person? Because it represents the third party.

What other party may *he* represent? No other.

What person, then, has it always? Third person.

Teacher will write upon the board, opposite "1. *he*," *always has third person*.

Similarly treat "2," and obtain that it always represents the third party, and so always has third person.

Give properties of *who*. Children say they cannot.

Why not? Because it isn't in a sentence.

Teacher therefore writes: "The man *who* sows his field trusts in God."

Children now say that *who* has third person, because it represents the third party.

How do you know that it represents the third party? It represents the same party as the noun *man*, its antecedent, and since *man* represents the third party, and has the third person, *who* must also have third person.

Why, then, has *who* third person? Because its antecedent has third person.

Teacher writes: "You *who* love your brothers are happy."

Tell me the person of *who*. Second person.

Why? Because its antecedent *you* has second person.

Teacher writes, "I *who* stand here am your friend."

Tell me the person of *who*. First person.

Why? Because its antecedent *I* has first person.

What person, then, may *who* have? First, second, or third.

How shall we determine its person? By the person of its antecedent.

Summary.—What part of speech are all these words? Pronouns.
How many persons did we find *he* may have? One only.
We will mark it thus +.

1. *he*—always has third person, +

Referring to 2: How many persons may *they* have? One only.
How shall we mark it? With a +.

Referring to 3: How many persons may *who* have? Three.

How shall we determine which one it has at any time? By its antecedent.

May we use the same mark for 3 that we have used for 1 and 2? No; we must devise another. We will mark it O.

Similarly question for each, until the list is completed, and the results appear thus:

- | | |
|---|---|
| 1. <i>he</i> —always has third person | + |
| 2. <i>they</i> —always has third person | + |
| 3. <i>who</i> —depends upon its antecedent for its person | O |
| 4. <i>I</i> —always has first person | + |
| 5. <i>it</i> —always has third person | + |
| 6. <i>which</i> —depends upon its antecedent for its person | O |
| 7. <i>my</i> —always has first person | + |
- etc., etc., etc., etc.

Referring to marks: How many different kinds of marks have we found it necessary to use? Two.

Who can draw a conclusion from this? There are two kinds of pronouns on the board.

Let us separate them thus:

+	O
he	who
they	which
I	that
it	what
my	whose
your	etc., etc.
etc., etc.	

What did we learn about the person of the + pronouns? They may have one person only.

How, then, may we determine their person? We can always tell it from simply looking at them, or we can tell their person by their form.³

Opposite the + pronouns teacher writes, *show their person by their form*; thus:

+	
he	} show their person by their form.
they	
I	
my	
it	
etc.	

What did we learn of the person of the O pronouns? They get their person from their antecedent.

Teacher writes this on the board thus:

O	
who	} get their person from their antecedent.
which	
that	
what	
whose	
etc.	

Teacher writes opposite "3. *who*," *depends upon its antecedent for its person*.

Similarly question for each until the list is completed and the results stand thus:

1. *he*—always has third person.
2. *they*—always has third person.
3. *who*—depends upon its antecedent for its person.
4. *I*—always has first person.
5. *it*—always has third person.
6. *which*—depends upon its antecedent for its person.
7. *my*—always has first person; etc., etc., etc.

What two classes of pronouns have we thus discovered? Those that show their person by their form and those that get their person from their antecedent.

According to custom we want a name for each class. We will call those pronouns that show their person by their form *Personal Pronouns*, and those that get their person from their antecedent we will call *Relative Pronouns*.

Require these definitions to be given by the children individually and in concert, write them upon the blackboard, and give the usual drill exercises on this lesson.⁴

NOTES.

1. Before giving this lesson the children must have a knowledge of nouns, their classification, properties, and relations; also they must be able to define and distinguish pronouns, giving their properties, relations, and antecedents.

2. The children have been taught that the first party is the speaker, the second the person spoken to, the third the person or thing spoken of.

3. If the children do not give this answer readily, the teacher can get it by some such method as this: Write two words upon the board, as "cat," "melon"; ask how they are able to tell those words apart. Children may say they are made of different letters, or are spelled differently. Then ask if they have to stop to spell each word before they can tell it. No, they know the minute they look at it, taking the word as a whole.

What of the word do we see when we look at it? Its shape; or, better, its form.

4. This distinction between personal and relative pronouns is but partial, and yet it is sufficient for beginners of technical grammar. It is the idea from which, when the children have advanced farther in this science comes the finer distinction, that of the relative pronoun being a connective while the personal pronoun is not, and this may be added to the definitions already formed.

PENMANSHIP.—I.*

WE speak of penmanship not as a fine art, but as a branch of education which materially affects every child whether destined to become a professional man, mechanic, or laborer. Every one should have a good, plain handwriting, and should obtain it in the public schools.

This is a purely gymnastic exercise, and should be acquired by the greatest precision and accuracy. The simple thing to be accomplished is the making of a perfectly smooth line by both nibs of the pen. Secure an erect, easy position; both feet squarely planted on the floor; knees at a little more than right angle; forearm on the table; elbow never drawn back of a right angle. Slide on the nail of the third finger; let the pen rest in the thumb and first two fingers. Give a great many simple exercises in movement. Thorough work in position and movement, holding the pupils to the same in all their writing, will give each child an excellent handwriting.

The average student in the high school cannot write more than ten words per minute, while, after proper training, he will easily reach fifteen. This makes a difference of forty minutes in two hours' writing. The handwriting reacts upon the mind, and usually indicates the mind.

The three essentials to a good handwriting are legi-

bility, ease, and rapidity. The best business writers are those who have studied some system thoroughly until they can write an accurate copy, afterwards modifying this to admit of rapidity.

SIMPLE DIRECTIONS.

A child who is old enough to go to school can be taught to keep his feet flat upon the floor. This should be insisted upon, for if the feet are out of position the whole body will be affected. If they are thrown back under the seat too much weight will be put upon the arms, and they will be thrown out upon the desk too far, interfering with the movements of the hand and the slant of the letters; if thrown too far forward the body must be thrown backward to balance, and very soon the pupil is in a slovenly position. The body should be straight and slightly inclined forward, but not to bring any great weight upon the arms. The arms should be thrown out from the body nearly to the corners of the ordinary school-desk, but never beyond. This will bring the eyes within from thirteen to fifteen inches of the paper, which is the right distance. The paper, or book, should be placed on the desk at an angle of forty degrees; then, by simply swinging the hands toward the body, every downward stroke will slant fifty-two degrees.

If a child at six writes with a short, blunt pencil on a slate he will make very poor letters, the hand will be in a bunch, and the forefinger will describe one side of a pyramid. He will contract a habit that will require years of patient, hard work to overcome. This is nothing but a bad habit contracted by the use of a little slate-pencil at the beginning of his career, but he will always think it natural. If he had been given a long, sharp pencil, with a good slate, ruled to indicate the height of every letter, and taught to point the pencil over the shoulder, always taking position described above, he would have formed a habit which would have given him a good handwriting.

In the second year use lead pencils, choosing those that are neither too hard nor too soft. We use Dixon's M or Faber's No. 3, which are very smooth and entirely free from grit.

One very important thing aimed at is to carry a light hand. If a large, broad-pointed pen be used this cannot be done; if a very fine one be used it will soon wear out, so we take the middle ground and use a pen of medium point and flexibility. We prefer the Spencerian No. 1. Ink should be jet black, and should flow freely. "The pen is mightier than the sword," and the teacher who would attempt to assist in having it skillfully wielded must exercise care, have patience, and persevere, remembering especially that "He who is faithful in that which is least, is faithful also in much."

LET every session have in it some exercise that shall inspire the children to observe nature more closely, and describe its features or activities more easily and skillfully.

WHAT THE GRANDMOTHERS SAY.



SIXTY years ago to a day
Three maidens lived,—so the grandmothers say,—
In a farmhouse under an old elm tree,
And they were as busy as maids could be,
And as fair as busy,—the grandmothers say,—
O, sixty years ago to a day.

For Molly could spin and Dolly could bake,
And Polly had all the butter to make;
And never an idle moment had they
To spend with the village girls at play;
For Molly must spin, and Dolly must bake,
And Polly has all the butter to make.

Those were good old times,—so the grandmothers say,—
O, sixty years ago to a day,
When bread was baked in the proper way
And butter was sweet as the new-mown hay;
And yarn was yarn,—so the grandmothers say,—
O, sixty years ago to a day.

Now, who were these maidens so clever and quick,
Who never were naughty, idle, nor sick,
Who were busy and healthy and handsome or gay,
O, sixty years ago to a day?

I think you will not have to go very far
Before you find out who these maidens are;
Your grandmother's one and my grandmother's one,—
In fact, every grandmother under the sun,
Was one of the Mollys or Dollys or Pollys
Who did such wonderful things, they say,
O, sixty years ago to a day.

—Australian Schoolmaster.

FIX FIRMLY.—It is possible for a fact, a truth, a face, a form, a sentence, to be so vividly impressed, in an instant, as to be permanently retained and made readily available, but these occurrences are so rare as to be highly improbable in our experience. A single impression seldom suffices for permanency. It is, as a rule, only a question of time for the erasure of the impression of anything seen or considered but a moment.

Nevertheless, the keener the attention when anything is learned, the less repetition is required, and it becomes a time-saving process to acquire such skill in attention as to reduce the waste of time in reconsideration to the minimum. Into everything that is well learned we spin a part of our best self, our thought. Our knowledge, when it is acquired with interest, is like the web of the spider, who puts himself into it, and still retains such a sensitive connection with it that to touch any thread touches the spider himself and awakens him from sleep. Our knowledge should be such that to touch it at any point is to make everything connected with it alive in memory. —*Journal of Education.*

UNTIL the happy time arrives when some such magazine as *Wide Awake* or *St. Nicholas* shall be as freely provided for the use of school children as the textbooks now are, teachers would do well to have an eye for any article in them which can supplement or make more interesting their own peculiar work. Take, for instance, Margaret Sidney's articles on Concord, now running in the *Wide Awake*. A reading of each installment to a geography class would indelibly impress their study of Concord on the mind.



LANGUAGE LESSON.

1. SHOW the picture to the pupils and ask them to tell you all the objects they can see. Write the list of objects on the blackboard.
2. Ask the pupils what the objects in the picture are doing. Write these sentences on the board, and require the pupils to copy them.
3. Ask the pupils to describe the objects. Write these sentences and require copy.
4. Let the pupils question each other in regard to the objects.

Illustration 2.—What do you think the girls' names are, Agnes?

Ans.—I think the girl standing up is Lucy Lee, and the girl who is kneeling is Bertha Stone.

5. Let some pupil take the picture and tell a story about it.
6. Remove the picture and let all the children write a story about it.

Object of the lesson:

1. To cultivate powers of (1) observation; (2) imagination; (3) expression.
2. To give practice in sentence-writing, use of capital letters, and punctuation marks.

A HELP IN TEACHING ENGLISH.

BY PAUL B. OTIS.

THE most striking feature of the English language is its mixed origin. Any one, however, that has taught its history in an elementary way will testify that the origin itself never was so effectually mixed as in the average scholar's mind. The phantom-like character which even historical facts assume in the minds of pupils that are taken up with making history of their own in five-minute pieces, prevents the teacher from making plain the structure of English by associating it with the early history of England. And so in want of a more rational framework upon which to fasten in place the successive changes in our mother-tongue, that seem to play a perpetual game of "puss-in-the-corner" in the pupil's memory, I have adopted the upper Mississippi River with its chief tributaries.

The comparison, here briefly suggested and to be expanded in the schoolroom, is as follows:

The Gaelic Kelts, crossing over from the mainland in very early times, conquered the earlier inhabitants of Britain, and were in turn invaded and conquered by their own kindred, the Cymric Celts. The two peoples soon fused, and Celtic was their common speech. The Roman conquest (55 B. C.—70 A. D.) had but little effect upon the language. Not until the Teutonic invasion (449 A. D.) was there any radical change. Thereafter the Celtic almost disappeared before the new dialects of the Angles, Saxons, and Jutes. At last by a natural process these fused into the Anglo-Saxon (828 A. D.), which remained the tongue of the common people long after the Norman Conquest (1066 A. D.) had brought into the country a whole new language. After the blending of the Norman and Anglo-Saxon had taken place, no important sudden influx of a new element occurred.

The twofold Celtic tongue I represent by the confluence of the Mississippi (Gaelic) and Minnesota Rivers (Cymric), while the course of the Mississippi as far as the entrance of the Missouri, represents the continuance of this fused Celtic. The Missouri, in volume far greater than the main stream, corresponds to the Anglo-Saxon. The Norman-French element is represented by the Ohio River. The waters of this stream not only approximately show the relative number of Norman words introduced, but remaining so distinct as to be clearly distinguishable from those of the Mississippi for some distance below the point of confluence, also represent the slow union of the Anglo-Saxon and Norman.

This simple association puts an end to the mental "puss-in-the-corner" as quickly as the bell for the end of recess in a well-ordered school.

Be out of doors with the pupils, studying fruit, foliage, birds, or autumn flowers.

PHYSICAL GEOGRAPHY.—(II.)

Hills.

BY MARION T. KITTREDGE, FITCHBURG, MASS.

1. Outcome of a (long) slope.
2. How formed?
 - a. By erosion of anti-clinal strata. (*Le Conte*, p. 243.)
 - b. Left by moraines or eroded by glaciers, drift. (*Le Conte*, p. 514.)
 - c. Winds, dunes.
 - d. Volcanic action.
 - e. Hill-making under water.
3. Parts of a hill.
 - a. Summit, intersection of slopes.
 - b. Sides, slopes. (2).
 - c. Base; irregular line marking termination of slopes.
4. Slopes.
 - a. Most important. Why?
 1. Contains all soil.
 2. Can any more vegetation grow than if level?
 - b. Kinds.
 1. On same hill, same or unlike?
 2. In glacial regions,

Northern slope, steep and smooth.
Southern slope, gradual, stony.
 3. Determined by

Inclination	} of strata.
Hardness	
5. How occur.
 - a. Isolated. { Formerly one continuous ridge or
 - b. Ranges. { hill.

Chains. Time produced such changes.
- 6 Use.
 - a. Break force of the wind.
 - b. Attract and distribute moisture.
 - c. Keep ingredients of the soil in reserve.
 - d. Produce a hardier growth of plants and animals.

REFERENCE BOOKS: *Le Conte's Geology*; *Dana's Geological Story Briefly Told*; *Reclus's The Earth*; *Reclus's The Ocean, Atmosphere and Life*; *Ruskin's The True and Beautiful*; *Abbott's (Jacob) Water and Land*; *Huxley's Physiography*; *Physical Geography*; *Geology*.

In this lesson ask pupils to go to the molding-board and make the differently-shaped hills which they have seen. In a few lessons they may be able to produce the conformation of the section of country in which they live. It is well to use the technical terms of the geology as they are easily explained and will be of great benefit to the student later.

— In 1886 the United States produced 10,000,000 tons of iron ore; zinc, 42,641 tons; quicksilver, 2,291,634 pounds; building stone, valued at \$19,000,000; bricks and tiles, valued at \$38,500,000; grindstones, valued at \$2,500,000; and precious stones, at \$79,056.

— The following cities of the world, according to the latest evidence, have over one million inhabitants: Aitichi, Japan; Berlin, Prussia; Canton, China; Changchoofoo, China; London, England; New York; Paris, France; Siam, China; Tschautchau-fu, China.

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{ Old Series, Vol. XL., No. 3. }
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BEWARE OF IMITATIONS.

AMERICAN TEACHER.

VOL. XI.

Devoted to the Methods and Principles of Teaching.

No. 3.

BEFORE CHRISTMAS.

BY W. WHITMAN BAILEY.

LD Santa Claus is busy now,
Afar within his cave of ice,
In making each one something nice,
To hang upon the Christmas bough.

His little elves work night and day
To fashion all the wondrous toys
That so delight the girls and boys,
And give them gladsome holiday.

New messengers will yet arrive;
The children everywhere will write
"Old Santa, don't forget me, quite!"
How shall he manage to survive?

Experience and good nature, too,
With plenteous love for great and small,
Must aid him, if he's helped at all,
That so his pledges may be true.

We surely know his bells will ring
Above our roof on Christmas eve,
That here his presents he will leave,
That benediction he will bring.

Then, to the busy Saint, good cheer!
We'll bear our lot as best we may
Until the joyous Yule-tide day
With "peace, good will" once more is here.

RESOLUTIONS FOR A CHILD.

BY ANNA B. BADLAM, DORCHESTER, MASS.

- | | |
|---|---|
| 1. I have two hands
To work or play,
I'll do my share
Of each, to-day. | 2. I have two feet
Papa to meet;
I'll run to him
With kisses sweet. |
| 3. I have two ears
Mamma to hear,
I'll mind both her
And papa dear. | 4. I have two eyes;
They're honest, true;
I'm not afraid
To look at you. |
| 5. I have a mouth
The truth to tell;
I'll try each day
To speak it well. | 6. I have a mind
That ought to grow;
I'll try each day
New truths to know. |
| 7. I have a soul
As pure as snow;
God grant that I
May keep it so. | |

CHARLIE TELLS A LIE.

BY IDA M. GARDNER, PROVIDENCE.

I.—HOW DID IT HAPPEN?

CHARLIE W—— was one of the most lovable boys in Miss Greene's school. His frank, manly face won instant regard, and as the days lengthened into weeks and months, there grew up between the boy and his teacher a mutual love and confidence that was ripening into a lifelong friendship.

"Mamma, can't I have some roses for my Miss Greene?" was a frequent morning request that revealed the boy's attitude toward his teacher,—always one of love and trust, never one of fear.

Charlie was a little fellow, eight years of age, and consequently recited in the lower classes to the assistant teachers. He was a genuine boy, full of animal spirits, which sometimes made him restless in his class and troublesome to his teachers.

Miss Greene kept the government of her school chiefly in her own hands. Yet she gave a certain part of it to her teachers. "Speak once, pleasantly. A repetition of the offence may come from forgetfulness, but the child must learn not to forget; therefore call him to you for a quiet talk, in which, while you admit that he may have forgotten, you impress the fact that this is a warning and that a third offence must send him to me. This talk is *your* chance to get a hold upon the pupil. At a third offence, speak pleasantly but gravely and firmly, and send him to me. This establishes your authority. I shall never decide a case without hearing your side of the question."

Charlie had been growing restless in Miss O——'s classes for several days, and was approaching one of those crises which must come once in a while to every wide-awake boy. With the confidence which always existed between Miss Greene and her assistants, Miss O—— said one day: "I fear I shall have to send Charlie to you soon. He seems to have been good as long as he can. I have talked to him, but I think he must go a little farther before reaction is possible. If he does, I shall have to send him to you." Before the class in arithmetic was over Charlie was again lawless and disorderly, and Miss O—— said, gravely,—

"Charlie may report himself to Miss Greene at recess."

The boy was sobered instantly, and gave no farther trouble. At recess Miss O—— said to Miss Greene;

"I have told Charlie to come to you this recess. He has not done it yet. What shall I do if he does not obey me?"

"When your next class comes into the recitation-room, say very quietly that he has not obeyed you, and that you cannot receive him in any of your classes until he has done so."

During the remainder of the recess Miss Greene quietly watched the boy. His heightened color and evident avoidance of her eye told her that he was having a struggle with himself. She therefore remained at her desk instead of moving about as usual, and smiled at him, if she happened to catch his eye, that he might be encouraged to come to her frankly.

Recess ended, but Charlie only gave a sigh of relief, and, slate in hand, passed into the recitation-room with his class. Miss O——, true-hearted teacher as she was, did not close the door as usual, knowing how much easier it would be for Charlie to come back through an open door. When the class had found seats, Miss O—— said quietly,—

"Charlie has not yet reported to Miss Greene, and I cannot have him in any of my classes until he obeys me. You may go now, Charlie."

The poor little fellow looked up, with the perspiration standing in great drops upon his flushed face.

"Miss O——, I know I have got to go; I know I must go, but it—seems as if I couldn't."

Miss O—— swallowed the lump that came into her own throat. It was not obstinacy that had the child in its grasp, and she was prompt to offer help.

"Yes, Charlie, you must go; but if it will help you I will go with you."

"No," he shook his head. "I'd rather go alone. Please may I sit still just a minute and think about it," he implored.

"Yes, for a moment, but I cannot let you take up too much of the time of the class."

The silence was dreadful while the little fellow struggled, and the others looked on in sympathy. At last little May could bear it no longer, and, unconscious of the presence of others, she sighed, "Oh, if he would only go quick, and have it over, how much better it could be!"

"Yes, indeed, it would. Now, Charlie, I can wait no longer."

The boy rose to his feet, took two steps toward the door, but sank back into his seat with a despairing "I can't!"

Then Miss O—— went to the rescue, and taking him firmly by the hand, said, "I will go too, but you must come now."

Miss Greene looked up from the Latin recitation, and waited for the trembling child to speak.

"Miss O—— sent me to you."

"For what?"

"My foot slipped in the class."

"Did Miss O—— send you to me for that, Charlie? Was it not because you were troublesome in more ways than one, and because you did not mind when spoken to?"

To each question he answered promptly and frankly, as he always did when questioned as to his misdeeds.

"You may go to your seat now, and I will attend to you after school," said Miss Greene, gravely; and the Latin recitation went on in a great hush of sorrow and sympathy, for every one loved Charlie, from the seniors downward, and all were full of regret to see him in disgrace, though he was too far away for them to know the cause.

II.—THE CAUSE OF THE LIE.

The classes went on as usual, but Miss Greene was constantly dwelling upon Charlie's lie. Once before the thing had happened, under somewhat similar circumstances, but that was when he first entered school, and fear might have been the cause. Now that could not be the case, for Charlie loved her devotedly. There was not a grain of untruthfulness in the boy's nature, and as Miss Greene recalled his always prompt confession on being questioned, she became convinced that the lie originated in the child's *inability*, at the moment of his shame and confusion, to *put into language* what he wished to say,—a conviction strengthened by later experiences. In fact, Miss Greene grew to believe that a large proportion of the lies told by children, who are not habitually untruthful, are told from the same cause. In the conflicting emotions of the moment, the power of connected thought seems paralyzed; the first sentence, consciously framed, comes out, without premeditation or intent of untruthfulness. That this was the true solution of the problem over which so many teachers have grieved, when otherwise good children have been detected in a lie, Miss Greene grew confident, as she recalled answers given her when she had asked of some erring child, "How *could* you tell me a lie?" "I never *meant* to, Miss Greene;" "I did not know I was going to;" "It slipped out *before I knew* it was coming;" "I don't know how it happened;" and a score of others. These actual answers in actual experiences, reveal the child's helplessness before the possibilities of his tainted moral nature, unaided by principle, but do not indicate any strain of deceit, inherent in the child's nature. None the less must such lies be dealt with, and the child taught to stop and think before answering, when he feels confused.

III.—WHAT WAS DONE ABOUT IT.

Twelve o'clock came, and Charlie stood by Miss Greene's side, with her arm around him, and her low, grave, but loving tones searching every corner of his miserable little heart.

"It has been a bad day, Charlie, and we must settle what is to be done about it. How many times did Miss O—— ask you to behave better?"

"Twice."

"Did you obey her?"

"No, ma'am."

"When she told you to come to me at recess, did you obey?"

"No, ma'am."

"When I speak to you, do you not expect to obey?"

"Yes, ma'am, always."

"When any teacher speaks you must obey just the same. I put these teachers over you because I cannot take care of you all, but you must obey exactly as if I spoke. Now, for these three disobediences I must punish you. You must stay a half hour after school for each one; but, Charlie, when I asked why you were sent to me, you told me a lie!"

"I didn't *mean* to, Miss Greene."

"I know you did not, and that it came out without your realizing that it was going to be a lie; but it was one, and I cannot let you tell me a lie. You know I think a lie is the meanest, most cowardly thing a boy can be guilty of. Have you forgotten our talk about that, last fall, Charlie?"

"No, ma'am," and Charlie's eyes filled to the brim with tears. Unconsciously he drew nearer to Miss Greene, and leaned harder against her as he recalled that "talk," whose influence had kept him right so long.

"I have thought that you remembered it, and have been so pleased that, for many months now, you have been strictly truthful. It hurts me to think that you failed to-day. I cannot bear to think that my boy has failed in manliness, in controlling himself until he could think what was the right thing to say, and so has grieved not only his teacher but also his loving Father in heaven. And then, Charlie, you know I told you that I should *always punish a lie*, though any other fault I could forgive, if frankly confessed. For disobedience to Miss O—— you must stay a half hour, but a lie is a disobedience which is far worse, and for the lie you must stay two half hours. It is late now, and your mother will be anxious if you stay longer. I will write her a note to say that I shall keep you every day for a week, and we will begin to-morrow. Good by, Charlie. Remember that, though she must punish him, Miss Greene is very sorry for her little boy, and loves him, too," and she drew the little fellow nearer and gave him kisses, not one nor two. His heart was full. He gave Miss Greene a hasty hug, and went away with only "Good by" at the door.

IV.—IMPRESSING THE LESSON.

The next day when school was dismissed, Charlie remained in his seat. Miss Greene came to him with a half sheet of foolscap, at the top of which appeared a written copy.

"Read this if you can, Charlie."

"I must obey Miss O——."

"Take your pen and write this copy as many times as

you can in the half hour. Every time you finish it, read it over and think about it. This is the first lesson to learn, for this is where you failed first."

"Yes, ma'am," and Charlie set to work very earnestly. At the end of the half hour the paper was well covered.

"Sign your name, Charlie. I will keep this paper until I see whether you have really learned the lesson."

The boy looked up quietly and happily, and his teacher felt that the half hour had borne good fruit.

The second day's copy was, "It is mean and cowardly to tell a lie." The little face flushed and grew sober, but the pen worked steadily through the half hour. Charlie signed his name and handed in the paper, with an air of being for the first time really acquainted with himself.

"I shall be so glad, Charlie, if this lesson is learned for life!"

A quick, pleased look relieved the downcast face, and with a loving "Good by" the boy bounded down the steps and ran home to dinner.

On the third day Charlie nestled against Miss Greene as he read in a half whisper, "It grieves Miss Greene and mamma if I tell a lie."

It is needless to say that if the first two lessons had produced a good effect, the third one did not fail. As the paper was laid on Miss Greene's desk, a look on the child's face seemed to say, "We both know that this will not happen again." On the fourth and fifth days Charlie had similar tasks to write out, each containing a moral lesson.

"Charlie, are these five lessons really learned?" asked Miss Greene, looking at the different sheets, and then at the boy, who stood quiet and subdued with a beautiful, tender expression on his face, that bore witness to his penitence.

"I hope so, Miss Greene."

"Ah, Charlie, so do I! And now my boy, your week is ended. Is there not one thing more you ought to do before you leave this week behind and begin on a clean, white one?"

Miss Greene waited for the little brain to travel over the whole field and return to the present.

"I haven't *said* I am sorry, but I am."

"I know that very well, Charlie. Is there not some one else who ought to know it, too? some one who has been sorry for you all these days?"

"Do you mean Miss O——?"

"Yes, I know that you are sorry for having troubled her, and do not intend to do it again, but do you not think you would feel better to tell Miss O—— that yourself?"


"I'll tell her now!"

The door was open, and Miss Greene could not avoid witnessing the reconciliation. In his fractious mood Charlie had not liked Miss O——, but her hearty acceptance of his manly apology and the sympathy and love in her voice, touched a chord that was ready to vibrate, and the two became fast friends.

METHODS FOR THE SCHOOLROOM.

A LESSON IN DICTATION.

(Time, 30 minutes.)

 R. EDITOR:—Nothing has surprised me so much during my summer work in normal institutes as the dislike by teachers of dictation work in language, arising from a confessed inability to know how to give it. To remedy this I turned the whole institute into a class of ten-year-old children and gave a lesson myself. The result has been so satisfactory in their expressions of gratitude for assistance and new zeal in favor of the hitherto dreaded work, that it has occurred to me that there might be other teachers who would be glad of the suggestions that might appear between the lines of a written-out dictation lesson. I had never supposed I had hit upon any royal way for giving such a lesson; but, knowing for what I was aiming in giving the lesson at all, I have done it after this fashion. Have you a corner for it in the TEACHER?

Yours for the cause, EVA D. KELLOGG.

LESSON.

"What's the matter? Is your lesson too hard for you?" Polly asked, one evening, as a groan made her look across the table to where Tom sat scowling over a pile of dilapidated books, with his hands in his hair, as if his head were in danger of flying asunder with the tremendous effort he was making.

"Hard! I guess it is;" and Tom dealt his "Latin Reader" a thump, which expressed his feelings better than words.

"I like Latin, and perhaps I can help you a little bit," said Polly, as Tom wiped his hot face and refreshed himself with a peanut.

"You! Pooh! Girls' Latin doesn't amount to much, any way," was the grateful reply."

Now, children, look very carefully on your books while I read a little bit of conversation that I am going to ask you to write on your slates for me, *just exactly* as it is printed here. How many believe they can, if I call all the words for you? Ah! But it is not so easy as you think, and you will have to have very sharp eyes to see all the little marks in it and all the spelling too. (Teacher reads.) Now, how many know who wrote this, or what the name of the book is? Yes, Jessie, you are right, *The Old Fashioned Girl*, by Miss Alcott, and you were a lucky girl to get it for your Christmas present. Try to read her charming stories, "Little Women" and "Little Men," as soon as you can. Now let us talk about this lesson for to-day. There are some things I will tell you about it when I give it to you, and some you must remember yourself. *I shall not answer any question after I*

begin to give you the lesson to write, and I shall not say anything about it but once. If you fail to hear what I say the first time, just lay your pencil and slate down without speaking, for your lesson is over for to-day, and you can write it another time.

Look at the first line, quotation marks first,—the first half of them, the half that stand on their heads; don't you remember? Now look along, and see where the last half is; I shall not tell you that; you must know yourselves as soon as Polly stops talking and put them where they belong, regular little commas high up, you see. What is the comma standing alone in "what's"? I shall not tell you of that apostrophe, either? Just as soon as I say "What's," you must see it right before your eyes, with the book shut. After "matter,"—how many *t's* in it?—I shall say "end of question," and nothing more. That means for you to know what to place there and with what kind of a letter to begin the next word. How many *s's* in lesson? Just as many as there are *t's* in matter; just as many as you have eyes and ears and arms. After "you" I shall say "end of a question" again. Of course you know that Polly and Tom must always have capitals, for they are capital little folks if they did quarrel a little. Notice that *k* in "asked"; say the word slowly, children. Now look at "groan," and say, three times aloud, *oa*, then you will remember how they come. But you must look very close while you say it; I want it written right up here in your foreheads. "Across" has just as many *s's* as the other words that have had double letters to-day. Look at "scowling"; leave off the "ling." There! Did you ever hear of a boat called a "scow"? All the class may spell the word twice in concert, *looking closely at it every moment*. What a long word we have now! "dilapidated,"—almost as long as some of you are. What does it mean? Who can give another word that means the same thing, just what you would say if you were saying it about some of the books you hold in your hands? "Worn out?" Yes, that will do. I am going to write this long word on the board. Now watch closely; don't turn your eyes once. Look on ahead now; I don't believe there is a word too hard for you for ever so long, not till you reach "asunder," only *one s*, one nose, you know, one mouth. "Tremendous" looks hard, but it isn't. "Effort" has a double letter again; spell it three times together. (In this way I would go rapidly over the whole lesson, not taking more than five or seven minutes.) Now, children, I am going to give you three minutes to look the lesson all over again, and I must not hear a sound but the ticking of the clock. Ready. Close books. Position for writing.

DICTATION.

"What's the matter? (end of question) Is your lesson — too hard — for you?" (end of question) Polly asked — one evening — (comma) as a groan — made her look

— across the table — to where — Tom sat — scowling — over a pile — of — dilapidated — books, — (comma) with his hands — in his hair, — (comma) as if — his head — were in danger — of flying — asunder — with — the tremendous — effort — he was making. (End of sentence and paragraph.)

"Hard! (beginning of quotation and 'Hard!' is an exclamation). I guess it is," — (comma) and Tom dealt — his "Latin Reader" (Latin Reader quoted) — a thump which — expressed his feelings — better than words. (End of sentence and paragraph.) (And so on to end of the lesson.)

Open books. Now, children, I am going to trust you to correct your own work. How many believe they can see well enough to find out their mistakes? It will need very sharp eyes. Make a cross over every mistake you find, and then I will call for the crosses. (Children work, and teacher walks among the silent class noting progress.)

Ready. Books closed. Position. All who found they were perfectly correct please stand. What! only so many? Well, I told you it was not easy to write a thing just as it is in the book. Those who have only one cross may stand. Two crosses. Three crosses. (And so on.) Now how many are ready to show me their slates and are very sure they saw all that was wrong? Who will agree to give me ten cents for every error I can find that they did not see? One boy agreed to do this, and he owed me a dollar before I was through looking over his slate, and he hasn't paid me yet, either. Bring me your slate, Edith; and yours, Charlie.

BENEFITS OF THE LESSON.

Concentration,	Language,
Spelling,	Comparison,
Punctuation,	Self reliance,
Memory,	Eye training,
Observation,	Accuracy.

Can one short lesson give more?

CARE FOR THE EYES.

BY C. W. SOUTHWORTH.

UNLESS figures lie, as they certainly ought not to, the number of blind persons in the United States is increasing at a frightfully rapid rate. Between 1870 and 1880, for instance, it increased 140 per cent., while the increase of the total population was but 30 per cent. Most of this increase of blindness is due to the ignorant over-use or abuse of the eyes. The above figures refer only to cases of total blindness. There is probably an equally rapid increase in near-sightedness which is not merely a disability but is generally dependent upon disease of essential portions of the organs of sight. In most instances it results from the improper use of the eyes.

That which chiefly concerns us is a statement recently issued by James W. Queen and Company, Philadelphia,

"that the examination of the eyes of very many thousands of children at different periods of school life has demonstrated the fact that in the larger proportion of cases the damage has been done by some fault in the method or conditions of using the eyes for school work."

If this be true we cannot be too prompt in meeting the issue. If the public should become aroused by the statements that are being published all over the land, the schools would inevitably suffer from spasmodic criticism. The eye is too important a factor in human progress and individual prosperity and pleasure to be trifled with never so lightly. In various countries of Europe the care of the eyes of school children has become the charge of special commissions and medical officers appointed by the government, and the lighting of schoolrooms, position of scholars, hours of study, even the conditions of the general health, and special capacities of the eyes of each individual pupil, are matters of official inquiry and concern.

In this country we must depend on teaching each individual and each school to take care of itself. Each teacher should attend to the matter at once. The school board will readily invest fifty cents in the purchase of a "test card," of which we give a miniature sample.

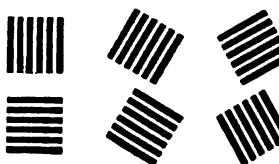
For good sight the eye must be able to get distinct impressions of distant objects, must be free from any "notice-

TESTS OF VISION FOR USE IN SCHOOLS.

No. 1.

I A L V T W
O D C F P M
3 Z H N 2 E

No. 2.



No. 3.



PREPARED BY
JAMES W. QUEEN & CO.

PHILADELPHIA

able astigmatism," and must have sufficient power of focusing near objects. Block letters, just visible in a good light, to a person with perfect distant vision, at a distance of twenty feet, is the first test. The second test is a series of six sets of parallel lines, each set running in a different direction from the others. When there is any notable degree of astigmatism present, the lines in some one set will be clearer or can be distinguished at a greater distance than the others. The third test embraces a series of words printed in small block letters. These are so small that the greatest distance at which they can be read is about ten inches. But they can be read closer to the eye, according to the power of the eye to accommodate or focus for near objects; and by measuring the distance of the nearest point at which they can be read by an effort, even for an instant, the extent of this focusing power is determined.

It is said that the use of these tests will enable the judicious teacher to make the best arrangement of scholars in the schoolroom, with reference to their powers of seeing; and to secure for them the benefit of the best light possible in the room at his disposal, by so arranging their tasks that close eye-work shall not be required at such hours as the light is insufficient.

THE REVOLUTIONARY WAR.—III.

BY CHARLES F. KING, BOSTON.

IT is wonderful how interested the pupils become in school work as soon as the teacher makes them apparently helpers in preparing the lesson. In this way the lesson is learned without effort, and frequently in a most unconscious manner.

The method suggested in these articles has grown out of the experience of the writer. Others have reached similar conclusions. Miss Sheldon's *General History* is a complete embodiment of this idea of helping the pupil to write history as a means of his learning history.

Allow me to re-explain the method as illustrated by Burgoyne's most fascinating campaign.

Divide the largest blackboard into three wide columns, numbering the columns for convenience from the left. Head the first "Principal Events," as below; second column, "Pupils' Side Lights"; third column, "Teachers' Side Lights." Direct the pupils to take a sheet of paper, open it and divide the width of two pages into three similar columns, headed as on the blackboard.

Each pupil is then asked to fill in the first column, using the textbook freely for help; one pupil, or the teacher, writing on the board, every event being questioned and criticised in reference to its chronological order and importance. The teacher must guard against

minor events being included with the great events of the war. Lead the children to take broad views.

After the first column has been arranged, then the second is taken up seriatim. As many stories, anecdotes, and biographical facts being written down as the pupils can supply at this stage of the study.

In the same way call out the names of as many books as possible. If the class have not studied this campaign before, the second and third column will not at first be very full. Instead of the teacher helping the pupils directly to the missing facts let her direct the pupils to get as many different histories, and biographies and pictures as possible on the subject, and allow the children the great pleasure of finding these facts for themselves. After a few days' search the teacher can supplement the efforts of the class. As each event in the second column is entered it should be fully explained by the class or teacher. When this epitomized text is completed, a very interesting exercise is found in having pupils stand at the blackboard and, using the pointer, tell the story of Burgoyne's Campaign, referring, as they proceed, to the books from which these facts are learned. Finally the writing of the three columns from memory is a good examination test. The accuracy with which this will usually be done is proof of the value of the method. No two teachers would, of course, fill out these columns alike.

THE THREE CAMPAIGNS.—III.

II.—BURGOYNE'S CAMPAIGN, 1777.

<i>Principal Events.</i>	<i>Pupils' Side Lights.</i>	<i>Teacher's Side Lights.</i>
Canada, 1777.	St. John's. Indians called. Expedition to Fort Schuyler under St. Leger. His pompous address. His plan.	Miss Walworth's <i>Saratoga</i> , p. 7. Fonblanque's <i>Life of Burgoyne</i> . Lossing's <i>Schuyler</i> , vol. II.
Lake Champlain.	Camp at Bouquet River. Miss Jane McCrea.	<i>Boys of '76</i> , page 182.
Ticonderoga.	Down the lake in boats. St. Clair. Boom. Ft. Independence. Ft. Defiance. Fort evacuated at night. The burning buildings. The effect of losing "Ti."	<i>Bancroft's</i> , vol. VI., page 570. Mrs. Richardson's <i>Our Country</i> , page 232. Miss W.'s <i>Saratoga</i> , page 13.
Fort Edward.	Gen. Schuyler's retreat. Felling the tree, etc. Fort Schuyler.	Dawson's <i>Battles</i> , chap. 22.
Bennington.	Col. Baum. Col. Francis from Mass. Warner's Green Mountain Boys. Col. Stark from New Hampshire. His remark. Morgan's riflemen.	<i>Boys of '76</i> , page 166. Carrington's <i>Battles of Rev.</i> , p. 327. <i>Boys of '76</i> , page 180. <i>Boys and Girls of the Rev.</i> , p. 54.
Bemis Heights, Sept., 1777.	Gen. Schuyler and Gen. Gates. Arnold. Gen. Fraser. His burial. Gates in his tent.	Miss W.'s <i>Saratoga</i> , page 21. <i>Soldiers and Patriots</i> , page 217.
Stillwater, or	Hudson Valley. Hemmed in on all sides. Provisions scarce.	Creasy's <i>Decisive Battles of the World</i> .
Saratoga, Oct., 1777.	No order given to Gen. Clinton. Surrender, Oct. 17, 1777.	<i>Camp-Fires of the Rev.</i> , page 218. <i>Boys of '76</i> , page 204. <i>Bancroft's</i> , vol. VI., page 3. <i>Fobes' Five Min. Rec.</i> , page 1.

GEOGRAPHY—THE HORIZON.*

(FOR PRIMARY CLASSES.)

BY A. H. KELLEY.

TEACHER.—If you were standing out on an open plain where there was no tree or shrub or house or anything in sight to keep you from seeing far away in all directions, what would seem to you to meet all around you as far away as you could see?

Pupils.—The earth and the sky would seem to us to meet all around us as far away as we could see.

T.—The line where the earth and the sky seem to meet all around you as far away as you can see is called your horizon. What is the line where the earth and the sky seem to meet all around you called?

broad plain, that way (indicating), and Thomas on one that way, and Henry on one that way, and Grace on one that way, and each have a horizon of his own? (All hands again up.)

T.—If the walls of the room and all the buildings and trees were removed, so I could see the line where the earth and the sky seem to meet, I could see my horizon. What could I see if the walls of the room and the buildings and trees were removed?

P.—If the walls of the room and the buildings and trees were removed, you could see your horizon.

T.—What is my horizon?

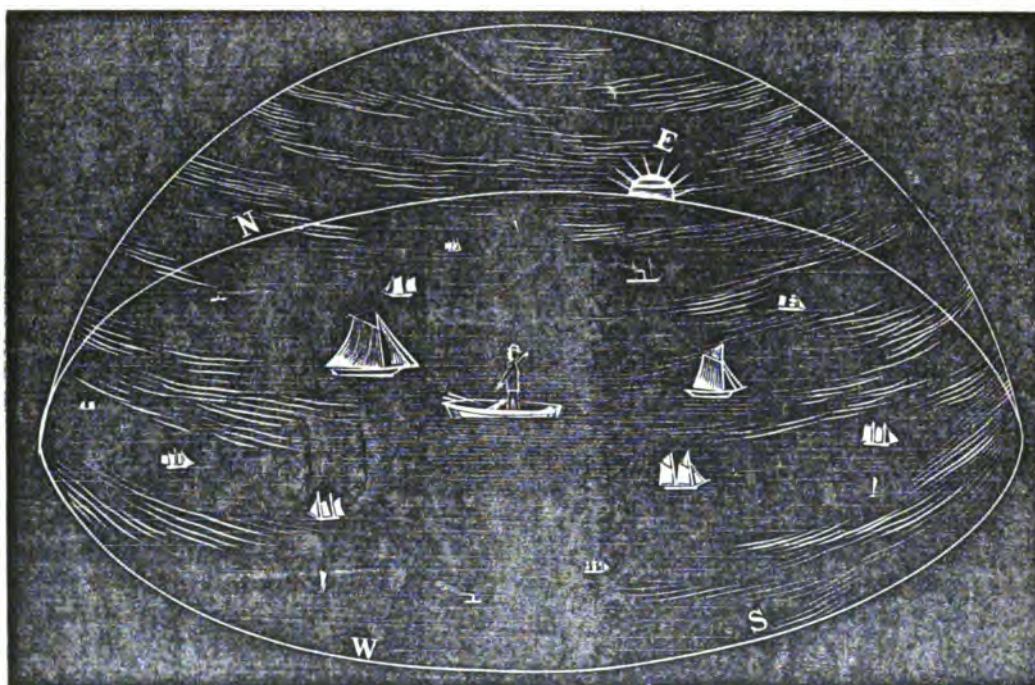
P.—The line all about you, where the earth and the sky seem to meet is your horizon.

T.—All of you who have stayed here with me while

Thomas and Mary and Henry and the others have been out on the broad plains to see their horizons, have your horizons as well as they, only you and I cannot see our horizons as they did theirs. How many of us have our horizons?

P.—We all have our horizons.

T.—How are our horizons different from those of Thomas and Mary and Henry, and the



P.—The line where the earth and sky seem to meet all around us is called our horizon.

T.—If Mary were standing out on another broad plain, far away from the one we have been talking about, what do you think would seem to her to meet all around her as far away as she could see?

All.—The earth and the sky would seem to Mary to meet all around her, as far away as she could see.

T.—What is the line where the earth and the sky seem to meet all around Mary called?

All.—The line where the earth and the sky seem to meet all around Mary is called Mary's horizon.

T.—Right. How many think George could go out on another great plain and have a horizon? All who do may raise hands. (All hands are raised.)

T.—How many think that John could go out on a

others who have been out on the broad plains?

P.—Thomas and Mary and Henry and the others who have been out on the broad plains could see their horizons, but we cannot see ours.

T.—Do you think any one else, not out on a broad plain, could see his horizon?

P.—I think a man out on the sea, away from the sight of land, could see his horizon.

T.—Right. How many think any one else could see his horizon? Well, Sarah, what is your thought?

P.—I think a man on the top of a mountain could see his horizon.

T.—You have both answered well, and we might think of other places where people could see their horizons. Do you think any one besides ourselves have horizons that they cannot see? You know we all have our horizons, but cannot see them. Do you think the people who live

in that large house across the square have their horizons? Well, James, what do you think?

James.—I think that the people in that large house have their horizons.

T.—How many think the boy in the boat can see his horizon? (All hands up.) Well, Mary, why do you think he can see his horizon?

Mary.—I think the boy in the boat can see his horizon because he can see where the earth and sky seem to meet all around him.

T.—Yes, James is right and Mary is right. All people have their horizons, wherever they are, whether in Boston or New York or London. No matter where they may be, all have their horizons. The horizon of any person is the line all about him, as far away as he can see, when there is nothing in the way to hinder, where the earth and the sky seem to meet? What is the horizon of any person?

P.—The horizon of any person is the line all about him, as far away as he can see, when there is nothing in the way to hinder, where the earth and the sky seem to meet.

"PATIENCE WITH LOVE."*

THEY are such tiny feet!
They have gone such a little way to meet
The years which are required to break
Their steps to evenness, and make
Them go more sure and slow!

They are such little hands!
Be kind! Things are so new and life but stands
A step beyond the doorway. All around
New day has found
Such tempting things to shine upon, and so
The hands are tempted hard, you know.

They are such new young lives!
Surely their newness shrives
Them well of many sins. They see so much
That (being immortal) they would touch,
That, if they reach,
We must not chide, but teach.

They are such fond, clear eyes!
That widen to surprise
At every turn; they are so often held
To sun or showers (showers soon dispelled)
By looking in our face,
Love asks for such much grace.

They are such fair-frail gifts,
Uncertain as the rifts
Of light that lie along the sky.
They may not be here by-and-by;
Give them not love, but more, above,
And harder,—patience with the love.

* Sent in by a teacher of Newburyport, Mass., from her scrapbook; authorship not known.

— "One science only will one genius fit,
So vast is art, so narrow human wit."

THINGS TO TEACH.

THE STUDY OF WOODS.

BY A. E. WINSHIP.

IN few ways can a teacher interest and employ her pupils out of school hours so helpfully as in setting them to collecting, preparing, and arranging the woods with which they are familiar. It is not as important that they collect a large number as that they prepare carefully and study thoroughly those they do collect. In some respects the early winter months are the best for beginning this study. Boys, especially those who want to make the best use of their time, seek something for indoor evening employment that will keep them active, that will leave something to show for their activity, and that they can enjoy doing.

We give, first, the treatment of one kind of wood through the year, after which reference will be made to each kind by itself. The Oak is a good variety with which to illustrate.

1. Saw a branch of an Oak tree so as to get a piece of the branch (Fig. 1), buds, and all, that is about six inches



long, and somewhere from one and one half to two and one half inches in diameter; saw the

ends straight across and brush clean; have no knots on it. The object of this is to show the peculiarity of the bark and the grain in the wood.

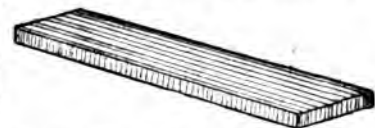
2. Take a similar section of the branch and saw it lengthwise (Fig. 2), to show



the grain of the branch, leaving the bark on as before.

3. Take another similar section and saw obliquely from the upper side, at one end to lower side, at the other (Fig. 3).

4. If acquainted with any furniture or extensive carpenter's shop, secure small, thin pieces of different varieties of Oak, about two inches wide, six inches long, and one half an inch thick (Fig. 4).



Possibly some child, by writing or otherwise, can secure very beautiful samples from establishments where elegant varieties of Oak are used, and it may be possible to have some polished samples by way of variety.

5. Get a good sample of a shaving of Oak. Get also a small twig that will show the arrangement of leaves (Fig. 5). In the spring get a budding twig (Fig. 6); later, a leafing twig, a flowering twig; a leaf (Fig. 7), and, in the autumn, acorns (Fig. 8).

Varieties.—There are upwards of thirty varieties in the United States; upwards of fifteen in New England. The White Oak rarely grows more than sixty feet in height; its limbs are very long and diverge at a very large angle, and are broad and gnarled at the point of branching; the bark on the trunk is light, and its leaves a light, shiny green color above and pale below; its acorns, about an inch long, are usually single, but sometimes grow in pairs.



The Post Oak is a small tree much like the White Oak. Its acorns are small, of a grayish color, and cling to very short foot-stalks. In many sections its wood is used for posts,—hence its name; it is also prized for ship timber.

The Swamp Oak is a rugged and homely tree; its leaves are uneven, of a bright green color above and whitish and downy beneath. Its wood is brownish, heavy, compact, of fine grain, great strength and elasticity. The cup of its acorn has pointed scales.

The Yellow Oak has leaves like the Chestnut. The cup of its acorn is hemispherical, with thin, small scales.

The Black Oak is of a rich yellow, almost an orange color, in its inner bark; its external bark, near the ground, is black; its grain is close and fine, and very strong.

The Scarlet Oak is one of the largest of the family. Its shining leaves, deeply cut, bright, and light, turn a bright scarlet in the autumn.

The Red Oak is a large tree, with porous, coarse-grained, reddish wood. It is of little value as timber.

Scrub, or Bear Oak, rarely grows more than eight feet high. Its acorns are of a deep orange color at the base, and are much sought by bears.

Uses.—The wood of the Oak is very valuable. It is applied to a greater variety of uses than any other tree. It makes the best of ship timber. No other tree makes such valuable axe handles. It is indispensable in all kinds of wheel work. It is the best wood for manufacturing many implements of husbandry. The bark of the

common Black Oak is used for tanning and dyeing. It is one of the best woods for charcoal. Is used extensively for casks and hoops.

Facts about the Oak.—Of the same general family as the Oak are the Chestnut, Beech, and Hazel. Its bark is very rugged. Its roots long, strong, going far into the earth. Its wood is very heavy. Is one of the toughest woods that grow, and one of the most durable. Its branches are strong. Its trunk is massive. Its branches are irregular. It grows very slowly, especially in its earlier years, rarely coming to maturity within a century,—sometimes not for one hundred and fifty years. A tree thirty years old is frequently not over eight inches in diameter, though it may be forty. At the age of forty years it is usually about ten inches in diameter. It is the hardest tree to cultivate.

The acorn is unlike the fruit of any other tree. There is scarcely another tree whose seed loses its power of reproduction so quickly. The largest ones should be planted, and only those from the most vigorous trees. They should be planted within a few weeks after ripening, covered in light soil not over an inch in depth. They furnish food for many wild animals, such as the bear, raccoon, squirrel, and wild pigeon. Pigs fatten upon them.

Have the pupils name as many articles as possible that they know are made from this wood.

ABOUT A FEATHER.

BY ALTEN.

THE PARTS OF A FEATHER.—Have at least one perfect feather. If not too much trouble, have several of the scholars have one. The quill feather of a goose is best, but of turkey, duck, or hen. In case no feather can be secured, a diagram will answer.

I.—PARTS OF A FEATHER.

1. *Axis*, main stem, barrel, or quill; is a hollow cylinder, and is embedded in the skin of the animal.
2. *Shaft*, continuation of quill; is four-sided; is horny; is slightly curved; and is filled with *pith*.
3. *Web*, network of lateral expansions on either side the shaft.
4. *Barbs*, lateral expansions which make the web; flat sides lap over each other.



II.—KINDS OF FEATHERS.

If wise, bring a bird of some kind into the schoolroom for them to see the feathers as a whole, making an object lesson on the bird.

1. *Clothing feathers*, those which cover the body.
2. *Quill feathers*, the long feathers of the wing and tail.
3. *Down*, the small, soft feathers, which grow on the skin beneath the covering feathers.



III.—THE FEATHERS OF COMMERCE.

Depend at first upon the knowledge of the pupils; secondly, upon the knowledge they can gain by inquiring of parents and friends; thirdly, give them such important facts as they fail to gather.

Write the answers in the order in which they give them, and afterwards classify them.

1. **USES.**—A collection of facts as they might give them:

Filling beds.	Making old-fashioned pens
Trimming bonnets.	(show quill pen).
Filling pillows.	Making large brushes.
Making cushions.	Making dusters.

2. VARIETIES.—

Down, the loose, fluffy barbs attached to the lower part of almost all feathers; the real down of some birds; the very downy feathers of some birds.

Plume feathers, from water-fowl and poultry birds.

Ornamental feathers, from humming birds, birds of paradise, ostrich, etc.

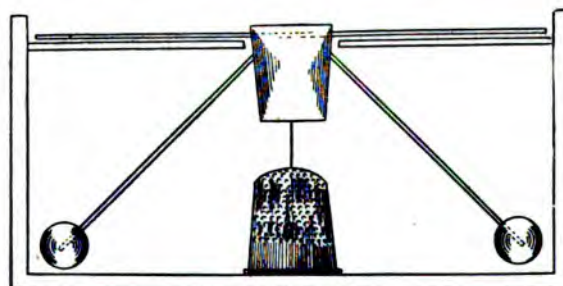
CROSS-WORD ENIGMA.

My first is in earnest, but not in fun;
 My second in a hundred, but not in one;
 My third in fruit, but not in pear;
 My fourth in china, but not in ware;
 My fifth in arch, but not in bow;
 My sixth in knit, but not in sew;
 My seventh in iron, but not in steel;
 My fifth in woe, but not in weal;
 My ninth in new, but not in old;
 My whole is worth millions of gold.

HOW TO MAKE A COMPASS.

BY G. W. COLEMAN

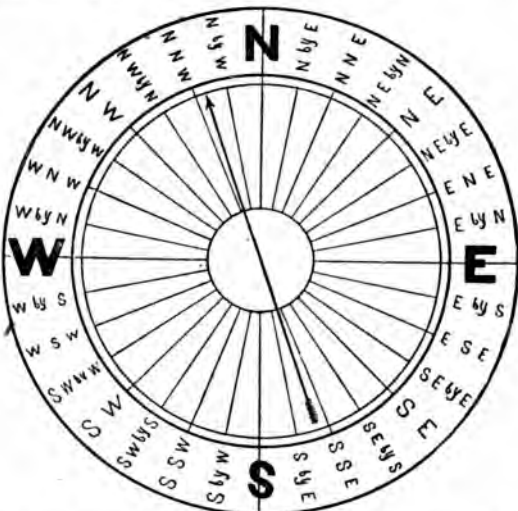
WHAT did the early explorers possess that gave them a supreme advantage over the ancients in the art of navigation, is a question that most of us have heard in some form or other during a geography or history lesson. The compass, of course. "But what is the compass," is the next question asked by a careful teacher, and the youth who has diligently studied the text replies: "An instrument with a finely balanced needle or arrow which invariably points toward the north." All good so far, but we think a loss is sustained in going no farther. Surely some profit would arise from a further study of this little mechanism which has been so important a factor in the history of the world. This might very readily be made the subject of a highly interesting and profitable home lesson, involving a little manual training and perhaps stimulating a healthy curiosity, leading the student to make a deeper inquiry into the principles involved. The following is only one of many ways for constructing a simple compass. With such an instrument in hand, the excursions into the woods, which young folks delight in taking, would become doubly interesting, for the children could then readily fancy themselves explorers in an unknown land.



Obtain a small brass thimble, well indented at the crown, and fasten it firmly (with glue if no better way suggests itself) to the center of the bottom of a circular box three or four inches in diameter and about two inches in depth. Out of stiff cardboard construct a disc, as in Figure 1, whose diameter shall be the same as that of the box.

Into the center of the smaller end of a medium-sized cork thrust the eye-end of a stout needle far enough to make it firm. From an ordinary knitting needle break off two equal pieces whose length shall be one and a sixth times the depth of the box. Then insert an end of each piece into one of two equal spheres of putty or soft gum; thrust the other two ends into the upper portion of the cork, as indicated in the figure. If, after setting the pointed end of the needle into one of the central indentations of the thimble, equilibrium is not maintained, add or take from the putty balls, or change the position of the broken needles in the cork until it will remain properly balanced. Having it well adjusted, put the disc on over all. Care should be taken to make the space in the center

of the disc large enough to admit of a free movement of the cork. Finally, magnetize a piece of knitting needle whose length is nearly the diameter of the disc, by passing it several times over one of the poles of a strong magnet, and then thrust it half-way through the crown of the cork. Our home-made compass is now complete.



The disc should not be held in place by glue, but with very small pins, so that if the needle is shaken from its perch it can easily be readjusted.

The needle will point to the magnetic pole, and not to the north pole of the earth. The variation, a few degrees westward of the direct north, is from the Atlantic region of this continent. The arrow in Fig. 1 indicates the average variation.

PROBLEMS IN ARITHMETIC.

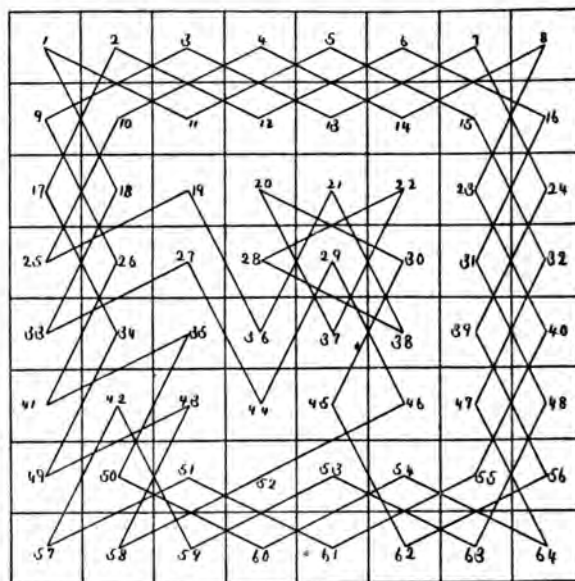
1. ARRANGE the nine digits and a cipher in four ways so that each time their sum shall be 100.
2. Divide 12 pints of liquid in a barrel equally between two persons, with only a 7-pint and a 5-pint measure.
3. A man wished to carry a fox, a goose, and a peck of corn over a river, but could take only one at a time. If he took the corn, the fox would eat the goose; if he took the fox, the goose would eat the corn. How could he get them all across?
4. The hands of a clock are exactly together at twelve o'clock. When will they be together again?
5. What is the difference between six dozen dozen and a half a dozen dozen?
6. Put down four nines so that they will make 100.
7. There is a number which reads from right to left and from left to right the same. Its first two figures, if divided by a certain number, give a quotient of 9; the two numerals at the right, if divided by a certain number, give a quotient of 9. If the whole number is divided by 9, the quotient contains a 9. If the whole number be multiplied by 9, the product contains two 9's. And if the two numerals at the left be placed under the two at the right, and added to them, the sum will be one-nineteenth of the whole number. What is the number?

EXERCISES.

TRAVELING ON A CHECKER-BOARD.

THERE is, perhaps, no more thoroughly puzzling puzzle than that of traveling on the checker-board, which multitudes have tried in vain, and which not one in a thousand could do without aid. Give it to your bright pupils, and let them try it if they wish; but before they get discouraged give them the order of the squares and let them draw the connecting lines. Even this will tax the ingenuity of most of your pupils.

The Puzzle.—Mark off, in checker-board squares, sixty-four squares in a large square. Number these squares, beginning at the upper left-hand corner, numbering across the top to 8, then beginning under 1, number across again, and so up to 64 in the lower right-hand corner. Begin at 1 and draw a line from the center of that square to the center of some other, until you have touched the center of every square once and once only, returning to 1.



This is called the Knight's Tour, and is said to be the most intricate and crooked journey on record. The move from one square to another is the move which a knight, a name given to one of the pieces in the game of chess, makes, which is one square in a straight line and one square in an oblique direction.

Those who have invented systems of mnemonics have certain words or sets of words which may be learned, and by them one may make the Knight's Tour, beginning in any square and proceeding in either direction to the end. The chess-board and the checker-board are identical in construction.

The order of the squares as they are touched by the line, an order to be given the pupils after they are satisfied that it is not an easy thing to do, is as follows:

1, 11, 5, 15, 32, 47, 64, 54, 60, 50, 35, 41, 26, 9, 3, 13, 7, 24, 39, 56, 62, 45, 30, 20, 37, 22, 28, 38, 21, 36, 14, 25, 10, 4, 14, 8, 23, 40, 55, 61, 51, 57, 42, 59, 53, 63, 48, 31, 16, 6, 12, 2, 17, 34, 49, 43, 58, 46, 29, 44, 23, 33, 18, 1.

A CURIOSITY.

MULTIPLY a number composed of the nine digits, 123,456,789, by 45, and the product is 5,555,555,505. Reverse the figures in the multiplier to 54, and the product is 6,666,666,606. Reverse the multiplicand to 987,654,321 and multiply by 45 and the product is 44,444,444,5. Reverse the multiplier to 54 and the product is 53,333,333,334. The first and last figures are the multiplier.

Use half the multiplier or 27, and the product is 26,666,666,667. The first and last figures are the multiplier. Reverse the figures of the multiplier to 72 and the product is 71,111,111,112, the first and last being the multiplier.

HIDDEN GEOGRAPHICAL NAMES.

BY GEO. W. COLEMAN.

ONE (a lake in Northern Minnesota) (a township of Montcalm County, Mich.) a little boy whose name was (a well-known lake in New York) (capital of one of the U. S.) very much amused his playmates by telling them of what he once saw in a menagerie. "And while I'm talking," he said, "you may eat these (large group of islands in the Pacific Ocean)es, but save that (large sea on the coast of China) (town in N. J.) for me to eat. I had no (cape of North Carolina) of the (silk manufacturing city of France) they being well caged. But I did not (County of North Carolina), however, to go very near them, for there was (Cape on eastern coast of Australia) in that (cape of Northeastern Australia). In the next cage there was a great big (lake in British North America) (island in the Bahama group) called a (river in South Carolina). He was all (county in Northwestern Ohio). (A (river in Mississippi flowing into the Tallahatchee River) (a large coast city of Maine) might have subdued his (Cape of Scotland). The (one of the thirteen original states) thing I saw was simply (lake in Michigan),—they called it an (a bay on the southwestern coast of Africa). He was a great deal larger than a (county in southeastern Alabama). I never should want to have one (a county of Eastern Central Kansas) me; he would not be (manufacturing town of France) to do it in a (group of islands in the Pacific Ocean) way. To make him (the name of five towns in Ohio) I gave him a (famous Italian city) (branch of the Mississippi River) (small island in Boston Harbor) and also a lump of (a little river in Wisconsin) which he took (the largest of the Furneaux islands, a group on the coast of Australia) (bay on the coast of Labrador) in eating. Like a (lake in California) I went (large city of China) into the monkey cage thinking to have great (an island belonging to Denmark) plaguing them. But I met with a (cape at mouth of Columbia River) which was hard to (river in Northern Utah), for one of the little (mountain in British America) rascals bit my finger so hard it still (city of France). I turned my back on them at once, and went to see the (river in Idaho). He was mostly (large European sea) with little (mountains in Vermont) and (mountains in New Hampshire) spots. I saw also a (lake in Canada), a (islands on the western coast of Africa) with its (sea on the coast of Asia) (city of France), a (headland on Martha's Vineyard) (mountains in Pennsylvania) bird, a (township of Elk County, Pa.), and a (river in Pennsylvania). After buying some (lake in Louisiana) and some peanuts for (large river in Siberia) I buttoned up my (county of Ireland) and went out into the (cape in Ireland) (county of Scotland) and started for home."

[The key will be given in our next issue.]

WHAT THE OLD HEN SAID.

PINTO — house he — running,
And begged me to — off his curls,
Over — head richly clustered,
As bright — as fair — a girl's.
"Why would — lose them, my darling?"
"Because our — hen," pouted he,
"Screams when — meet, 'Get-your-hair-cut!'
Get your hair cut! — know she means —!"
— *Our Little Ones.*

MISSING MOUNTAINS.

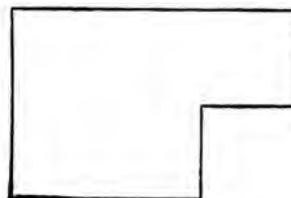
THE name of some mountain, or chain of mountains, in Europe, will be found to rhyme with the last word of the first line of each couplet.

1. If I ever visit foreign parts,
I should like to see the famous —;
2. If I wished for scenery wild and rural,
Of course I should seek it in the —;
3. Or in sultry weather I'd take my ease
On the snowy tops of the —;
4. Then if I'd go where the grapevine twines
I'd wander about the —;
5. But if the weather were cold and pluvius,
'Twould be best to winter by Mount —;
6. And then, in search of air still purer,
I'll hie me to the green Swiss —;
7. And take a look at landscapes Swiss
While traversing the Mount —;
8. And, as an Indian counts his scalps,
Carve on my stick the name of —;
9. Gazing upon eternal snows
From the far summit of Mount —;
10. Not being ready with our pens,
We can't describe the French —;
11. I'll set myself a task still harder,
And climb the Sierra —;
12. None being so fond of talk as us,
We'll learn Circassian on the —;
13. Too tired, though, to have a talk on
The summit of the lofty —.

— *Schoolroom Games and Exercises.*

TRY THIS.

How can this diagram, which represents two connected squares, be reduced to a single square by making only two straight cuts and rearranging the three pieces thus formed?



(The next issue will give the answer.)

THE AMERICAN TEACHER.

A. E. WINSHIP, }
W. E. SHELDON, } *Editors.*

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to re-submit the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 8 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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HAVE your pupils give five good reasons why a person should not drink alcoholic liquors.

Boys and girls are very susceptible to praise. Small doses of this article can be safely administered with happy results by the teachers.

At least once a month have the children in the lower grammar grades write the names of all the books they have read since the question was asked before. Ask what book they like best, and why they like it.

LAY aside something every "pay-day" for vacation. You will need a first-class good time in July and August, and it is easier to save a little each pay-day than to do it all in June.

EDUCATIONAL wonders will never cease. Think of a large school in a large city in a leading state where the latest edition of *Webster's Dictionary* bears the imprint of 1868. Fact!

It pays a teacher to take lessons in penmanship if she be not a good, plain, easy penman. Her "hand" is apt to be the standard of the pupil's. A teacher who writes poorly is a life-long excuse to a pupil who writes poorly.

"EXERCISES for the schoolroom" will be a prominent feature of the TEACHER. There are many teachers who need these, and they will find the best in these pages.

ONE teacher has had her class in the primary school read through eighteen "First Readers," and they attained through that experience the ability to read in that grade of book as well as an expert. Sight reading in that school is "sight reading" indeed.

THE only school study in which Mark Twain excelled was "spelling." It is not easy to see how a genius for good spelling was to develop into a genius for the rarest humor through the art of seeing, saying, doing things in a way close akin to misspelling. Teachers who magnify the gift for good spelling will magnify this virtue more than ever.

WE incline to sympathize with the position of those who say that a child should learn to read in the first four years of school life, and after that he should learn through reading. It has been a serious mistake not to expect more of the teaching of reading in the early years. There is little excuse for keeping up a reading lesson, merely as a reading lesson, daily for the entire course.

THE "No-recess" plan is popular in some places, but it frequently makes a great commotion. In some places it is said to create almost bitter feeling in a school board; to array lady teachers against a principal. It is not a matter sufficiently serious to disturb any one's peace of mind. Because one man likes it, it is no reason that every other one should; and because one does not, it is no reason that he should be exercised because every other one does not.

THE coming discussion in the matter of teaching penmanship in school is to be whether or not the forearm shall rest upon the desk as most of us were taught that it should, or whether no part of the hand or arm, except the two fingers, shall touch the desk in writing. There is as vigorous an attack being made upon the old-time custom of allowing the arm to touch the desk as there was upon oral spelling. It will be some time before the public will take as much interest in it, however.

SUPERINTENDENT BARRINGER of Newark, N. J., has a way of asking candidates for teachers' positions what they have read, what kind of reading they think has helped them most, what authors they like best. In few ways can a skillful questioner like Mr. Barringer learn so much of the spirit, tone, character, and attainments of a lady as by this means. A man needs to have common sense, as he has, to distinguish between the lady who can make a little reading go a long way in talking about it, and one who can make but little of a good deal of reading, in conversation.

It is exceedingly difficult to secure a good tone in school reading. It is almost an impossibility to secure it, if we

may judge from the results with really good teaching. There is no one element in oral reading so important as this. Without it no accentuation, no enunciation, no inflection, no emphasis, no facility in speaking words, will make good reading. With it all other things come more readily than without it. The teacher must deal with each pupil individually. She must discover the conversational tone for that child, and transfer that tone to every sentence spoken or read in the school.

"WELL begun is half done." The best thing a teacher can do when she assumes the management of a new class is to start well, and to start in the grooves expected to be run in throughout the year. First impressions on a child are lasting, and even if the teacher wins for herself on the first few days of the new year the appellation of "Miss Strict," she has begun well. As soon as children think that disorder is tolerated, there will be disorder. A stubborn child answers her teacher with, "I won't," and the teacher says she must, and feebly enforces her will, but does not reprove the offensive "I won't," the conviction is made in the minds of the other children that resistance is permitted, and the "I won'ts" grow into startling frequency. The real trouble will come in eradicating the tare sown by a careless person and suffered to spread until unendurable. It is easier to start right than to go back and begin over. Children will imitate politeness and good order as readily as insolence and disorder.

QUESTION DRAWER.

SCHOOL DEVOTIONS.

1. *How can I make my morning exercises interesting and instructive? I am not allowed to be too religious, and when I was allowed to read the Bible as I chose I was not always satisfied with the spirit and attention of the school.*

Answer.—Some teachers can make the reading of the Bible interesting without any objection on the part of committee or parents by selecting only the "character texts" or paragraphs. We believe no teacher who will make this purpose perfectly clear to the school and officials will meet with any objection.

The reading of carefully selected poems in whole or part, calculated to improve the character and ennoble the purpose of the pupils is sometimes admirably done. Singing is always a wise and inspiring devotional exercise.

The introduction of good instrumental music by the pupils is sometimes a rare treat.

The memorizing of beautiful selections recited first by one or two pupils and then by all in concert, is helpful and interesting.

Select reading by one pupil of something more at length with a beautiful moral or effect. Vocal solo, duet, or even quartette.

FRIDAY AFTERNOONS.

2. *How can I vary the Friday afternoon exercises? I had no difficulty for a few weeks when it was a new idea, but once a week in my busy life is more than I have brains or ingenuity for.*

Appoint a committee of three or five from the class to get up an exercise the first Friday in December, another committee for the second, etc., reserving every other Friday for yourself. Choose the

committee with great care; have at least one boy and one girl on each. Be careful that one of the committee has special adaptation to this work, or that he has home friends who will interest themselves. Have the committees appointed at least a month in advance.

Have an exercise after the general character of those furnished each month in the AMERICAN TEACHER and kindred papers one of the two weeks which the teacher reserves for herself.

Have an old-fashioned spelling-match once in two months at least.

Have a "geographical match" after the same general style of a spelling-match.

Have a "pronunciation match."

Give a lot of "queer questions" on one Friday, and have them answered the next Friday.

ATTENTION.

3. *In your judgment can a teacher compel, or in other words make, her pupils give her attention?*

An editorial in the January number upon "The Child's Attention," is a better expression of our opinion than we can give in brief. The teacher must win the attention of children in the early years of school life. She must not demand it. Early attention is involuntary, goes where it is attracted. The child is so constituted that until his mental habits are formed the very manner and tone which demand attention, distract it. One of the highest arts of teaching is to win the attention of children to a lesson to which they would not otherwise give attention.

"DOUBLE O."

4. *Does the protest against the repetition of the single letter come from those who never have changed their practice and are not inclined to do so, or are the best teachers going back to the old way because the tide of opinion is turning in that direction? Which is preferable to say "double o," or to pronounce the single letter twice, "o" "o"?*

We have not sufficient data from which to answer the first question, but our opinion is that the best teachers thought, other things being equal, that it was better to say d-o-o-r than to say d-double o-r, and consequently it was started in the educational press, in the normal schools, at the institutes and conventions. It was found, however, that the prejudice against it, and the objections raised to the change were such as to require more effort to insist upon the change than it is worth. There is no philosophical principle involved. There is no practical difficulty in the matter of saying "double o." It is one of the easiest and most fascinating things that a child learns. It is merely that there is no reason for saying "double" o. Neither is there any sense in calling our middle schools, "grammar" schools. There is a very general preference among educators for "o" "o," but no time, energy, or ink will be wasted by sensible men and women in enforcing it. If it wins its way, well and good; if not, no tears will be shed.

MEMORIAL DAYS.

3. *If I knew the memorial days I could prepare for them, but I do not know how to find them. I wish you would give a list.*

Nov. 3—Bryant.	Feb'y 22—Washington, Lowell.
" 10—Goldsmith, Schiller.	" 27—Longfellow.
" 22—George Eliot.	April 3—Irving.
" 29—Wendell Phillips.	" 7—Wordsworth.
Dec. 9—Milton.	" 23—Shakespeare.
" 17—Whittier.	May 26—Emerson.
" 26—Gray.	June 2—Saxe.
Jan'y 17—Franklin.	" 13—Thomas Arnold.
" 18—Webster.	" 14—Harriet Beecher Stowe.
" 25—Burns.	Oct. 19—Garfield.
Feb'y 12—Lincoln.	" 21—Coleridge.

FOR FRIDAY AFTERNOON.

A WINTER EXERCISE.

Short Recitations from the Poets.

SELECTED BY W. E. SHELDON.

Class in Concert.—Proud Winter cometh like a warrior bold!

His icy lances flashing in the light,
 His shield the night, starred bright with glittering gold,
 His mail the silver frost-work, dazzling bright!
 He turns his stern face to the north, and waits
 To hear his wind-steeds burst from Heaven's gates.
 He bringeth at his side the darkening storm,
 He sifts white beauty down to deck the plain.
 The bleak, dark forest shivers to keep warm,
 And brooks are bound with links of crystal chain.

First Pupil—December.—It likes me well, December's breath,

Although its kiss be cold,
 Nor yet the year is sealed in death,
 'Tis only growing old.
 The year is dying,—ay, is dead;
 But yet December's breath
 A glory and a glow can shed
 Irradiating death.

Second Pupil—January.—January is here

With eyes that keenly glow;
 A frost-mailed warrior striding
 A shadowy steed of snow.

Third Pupil—February.—February comes; a form

Pale vested, wildly fair;
 One of the North Wind's daughters
 With icicles in her hair.

Class in Concert.—And oh! 'tis winter,

Wild, wild winter!
 The winter, Oh! the winter!
 Who does not know it well?

THE FROST OF WINTER.

- (1) The pure white frost is come;
 We feel him in the night;
 The breathless leaves are numb,
 Motionless with affright;
 The moon, arisen late and still,
 Sees all their faces beaded chill.
 The pearly Frost is here,
 We see him in the night,
 Through all the meadows near,
 Waver his garments white.
- (2) The Frost is here,
 And fuel is dear,
 And woods are sear,
 And fires burn clear,
 And Frost is here.
 And has bitten the heel of the going Year.
 "Bite, Frost, bite!"
 The woods are all the searer,
 The fuel is all the dearer,
 The fires are all the clearer,
 My Spring is all the nearer;
 You have bitten into the heart of the earth,
 But not into mine.

- (3) I block the roads, and drift the fields with snow,
 I chase the wild fowl from the frozen fen;
 My frosts congeal the rivers in their flow;
 Make fires light up the hearths and hearts of men.

Class in Concert.—Crackle and blaze,

Crackle and blaze,
 There's snow on the housetops; there's ice on the ways;
 But the keener the season
 The stronger's the reason
 Our ceiling should flicker and glow in thy blaze.
 So fire, piled fire,
 Leap, fire, and shout,
 Be it warmer within
 As 'tis colder without;
 And as curtains we draw and around the hearth doze,
 As we glad us with talk of great frosts and deep snows,
 As redly thy warmth on the shadowed wall plays,
 We'll say winter's evenings outmatch summer's days;
 Within, the loud song to thy honor will raise;
 So crackle and blaze,
 Crackle and blaze,
 While roaring the chorus goes round in thy praise.

THE SNOW OF WINTER.

- (4) Yes! winter brings the beautiful snow!
 Oh! the snow, the beautiful snow!
 Filling the sky, and the earth below!
 Over the house-tops, over the street,
 Over the heads of the people we meet.
 Dancing, flirting, skimming along!
 Beautiful Snow, it can do nothing wrong!
 Flying to kiss a fair lady's cheek,
 Clinging to lips in a frolicsome freak!
 Beautiful Snow from the heaven above,
 Pure as an angel and fickle as love!

Class in Concert.—Oh! the Snow, the beautiful snow!

Gladly the flakes gather and laugh as they go!
 The world is alive, and its heart is aglow
 To welcome the coming of the beautiful Snow.

- (5) Just outside the window,
 Through the cold night air,
 Snowflakes falling softly,
 Dropping here and there,
 Covering like a blanket
 All the ground below,
 Where the flowers are sleeping,
 Tucked in by the snow.
 They are dreaming sweetly,
 Through the winter's night,
 Of the summer's morning
 Coming sure and bright.
- (6) O Winter, ruler of the inverted year,
 Thy scattered hair with snow like pearls is filled,
 Thy breath congealed upon thy lips; thy cheeks
 Fringed with a beard made white with other snows
 Than those of age.
 I love thee all, unlovely as thou seemest,
 And dreaded as thou art!

THE WINDS OF WINTER.

- (7) Blow, northern winds!
 To brace my fibers, knit my cords,
 To gird my soul, to fire my words,
 To do my work,—for 'tis the Lord's,—

To fashion minds.
Come! tonic blasts!
Arouse my courage, stir my thought,
Give nerve and spring, that, as I ought,
I give my strength to what is wrought
While duty lasts.

- (8) Blow, blow thou winter wind,
Thou art not so unkind
As man's ingratitude;
Thy tooth is not so keen,
Because thou art not seen,
Although thy breath be rude.

Class in Concert.—Welcome to the winter wind!
Nobler hopes and keener life,
Quickened in his breath of strife,
Through the snowstorms and the sleet,
On he stalks with armed feet,
Stirs whate'er of generous might
Time hath left us in his flight,
And our yearning pulses thrill
For some grand achievement still!

THE WINTER SUNRISE.

- (9) Then, like a burnished shield,
The sun's broad disc mounts in the purple sky;
While, white as virgin snow, the hoar-frost lies
On street and field.
They miss this glorious sight
Who late upon the pillow rest their head,
That first long ray upalanting rosy red
From clouds of night.

THE WINTER SUNSET.

- (10) His brief day's journey done,
Behind the distant hill's empurpled crest,
With blood-red track traced on the water's breast,
Slow sinks the sun.
The frosty diadem
Crowns every tree, and whitens all the lawn,
Scattering, till melted by to-morrow's dawn,
Each glittering gem.

A GLEE FOR WINTER.

Class in Concert.—Hence rude Winter! crabbed old fellow,
Never merry, never mellow!
Well-a-day! in rain and snow,
What will keep one's heart aglow?
Groups of kinsmen, old and young,
Oldest thy friends among!
Groups of friends so old and true
That they seem our kinsmen too!
These all merry all together,
Charm away chill winter weather!

GOOD BY TO WINTER.

- (11) Good by, good by, old Winter gray!
Your reign is fairly over!
We'll gladly change your snow and ice
For fresh green grass and clover!
Just for your comfort, Winter, gray,
We hope you will remember
With how much joy we welcomed in
Your chilly, grim December!
But ah! the green and radiant hills!
The meadows, freshly glowing!

The streams, imprisoned for so long,
So gayly, gladly flowing!

We mean to be polite to you,
And shake your hand at parting,
But dear old Winter, gray old Winter,
Don't delay your starting.

- (12) Good by, old Winter, good by once more:
At twelve to-night will your reign be o'er.
We're tired of you and your sleet and snow,
We're tired of hearing your chill winds blow;
We long for breezes that fill the air
With the scent of the spring-time flowers fair;
We long for meadows where daisies white
Lift up their heads in the warm sunlight,
And where the grasses are nodding all day,
With the spring-time breezes forever at play.

Good by, old Winter. We're sorry for you,
But we're glad your season is nearly through.
You brought us plenty of fun, we know,
For sleighing and snow-balling come with snow;
But Oh for a breath of the spring-time sweet,
When the earth and the sky in beauty meet!
And Oh for the trees where the birds all day
Are singing the golden hours away!
Good by, old Winter: the spring is near,
And you may sleep for another year.

AN AUTUMN HOLIDAY.

BY A PHILADELPHIA TEACHER.

COME and tell me, little children,
How you spent your holiday,
For your eyes so brightly sparkle,
And you seem so very gay.
And I wonder what it can be
That to all gave such delight,
Made your cheeks glow warm and rosy,
And your eyes shine clear and bright.

Charlie.—'Twas a lovely Autumn morning,
Just as clear as it could be,
And the sun shone very brightly,
And the wind blew merrily.
So we started with our baskets,
To the grand old chestnut wood,
For Jack Frost the burrs had bitten,
And the chestnut crop was good.
And we picked, and picked, and picked them
Till it seemed we had them all,
But the wind still kept on blowing,
Freely still the nuts did fall.

Bertie.—Yes, and then my brother Harry
Climbed the trees, and beat them well,
And the burrs came down so thickly
That they pricked us when they fell.
And as we were very busy
Picking them with all our might,
Still the sun kept on his journey,
And too soon came on the night.
But it really was too funny,
For we found a little snake
Sleeping in a leafy hollow,—
Such a fuss the girls did make.

Did the girls go with you nutting?
And did they enjoy it too?

Edith.—Oh yes, for the day was charming,
And the sky was very blue,
And we found, besides the chestnuts,
Other nuts beneath the trees.
Shellbarks there were thickly lying
Shaken down by Autumn's breeze.

Carl.—And then there were splendid walnuts
Which we hulled, and put to dry.

Bessie.—Yes, but then your hands are blackened.
Who would have such hands? Not I.

Carl.—Never mind,—just wait till winter,
Then I wonder who will think
When the walnuts they are eating,
That they stained my hands like ink!

Alice.—And, dear teacher, 'mong the dead leaves
Everywhere spread o'er the ground,
Some of the most lovely crimson
And the brightest gold we found.
In a large old book I laid them,
So that they might smoothly press,
And some day I'll bring them with me
And our schoolroom gaily dress.

Howard.—But they've every one forgotten
What we thought the best of all,
As we passed by Farmer Baldwin's,
Right beside the old stone wall,
He was picking off his apples,
And he told us to come in,
For he knew we all loved apples
As he once a boy had been.
Oh, their cheeks were bright and rosy,
And he really did not mind
If our pockets were most bursting,
For he was so very kind.

Robbie.—They were very good for luncheon
With the other things we brought,
And I think we more enjoyed them,
That they came to us unsought.
While we sat and ate our dinner,
Chatting in a merry way,
Down the tree a squirrel came skipping,
With bright eyes and coat of gray,
And he chattered when he saw us,
Scolding us with all his might,
I suppose he thought us stealing,
That the nuts were his by right.

All.—Oh, the day was full of gladness,
Not one little single thing
Happened that could mar our pleasure,
And such stores we home did bring.
If 'twere only always autumn,
We could have the loveliest fun,
But then winter brings enjoyment
When the snow-storms have begun.
And perhaps each season's better
Just because it does not stay,
And we'll hope some other autumn,
For another nutting day.

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

301. Solve by arithmetic: A cistern can be filled by two pipes, A and B, in 4 minutes and 5 minutes, respectively, and emptied by C in $2\frac{1}{2}$ minutes. A is opened for 2 minutes, and then A and B together for 1 minute more; then C is also opened. The cistern at this moment contained 361 gallons. When would it be full, and how many gallons would have passed through A and B respectively?

Solution: A can fill $\frac{1}{4}$ in 1 minute; and B, $\frac{1}{5}$; and C can empty $\frac{1}{2\frac{1}{2}} = \frac{2}{5}$ in 1 minute.

A runs 3 minutes before C starts; and B runs 1 minute.

A will, therefore, fill $\frac{3}{4}$ of the cistern in the 3 minutes.

B will fill $\frac{1}{5}$ of cistern in 1 minute before C starts.

A and B will fill $\frac{3}{4} + \frac{1}{5} = \frac{19}{20}$, before C starts, leaving $\frac{1}{20}$ to be filled. When C starts, $\frac{1}{20} = 361$ gallons are in the cistern.

$\frac{1}{20} = \frac{361}{19} = 19$ gallons $\times 20$ = contents of the cistern = 380 gallons.

A fills $\frac{1}{4} \times 380$, in 1 minute = 95 gallons.

B fills $\frac{1}{5} \times 380$ in 1 minute = 76 gallons.

C empties $\frac{2}{5} \times 380$, in 1 minute = $158\frac{1}{2}$ gallons.

A and B gain on C in 1 minute $\frac{1}{4} + \frac{1}{5} - \frac{2}{5} = \frac{1}{20}$; but, to fill the cistern, A and B must gain the $\frac{1}{20} = \frac{361}{19}$, which will require $\frac{361}{19} \div \frac{1}{20} = \frac{1}{2} = 1\frac{1}{2}$ minutes after C starts.

Therefore, A runs $4\frac{1}{2}$ minutes $\times 95 = 427\frac{1}{2}$ gallons, and

B runs $2\frac{1}{2}$ minutes $\times 76 = 190$ gallons, and

but C empties $1\frac{1}{2}$ minutes $\times 158\frac{1}{2}$ gals. = $237\frac{1}{2}$
Contents of cistern proved $\frac{617\frac{1}{2} \text{ run through A and B;}}{380 \text{ gallons.}}$

Z. RICHARDS, Washington, D. C.

305. Has the true source of the Nile been found? if so, where, and by whom? MARY KILGORE RAMEY, Brick Store, Va.

Ans.—The true sources of the Nile have been found by Capt. J. H. Speke and Capt. J. A. Grant, 1860-1863, and Sir Samuel Baker, March 14, 1864. The sources of the Nile are: (1) The Lake Albert N'yanza, whose outlet is the White Nile; (2) the junction of the Aleai and Dedhesa rivers, about latitude $30^{\circ} 30'$ north, which form the Blue (true) Nile. These rivers, the White Nile and the Blue Nile, unite near the city of Khartoom in the Egyptian province of Soudan, in latitude $15^{\circ} 36'$ north, and latitude $32^{\circ} 38'$ east.

"C. G. K.," Inwood, Ia.

Credit to "C. N.," Livingstone, Mont.

307. In naming the empires of Europe, should the British Empire be included?

Ans.—Europe embraces four empires and two republics. The British Empire is separate from the others, and should not be named in naming the empires of Europe. The British Empire contains two great islands, and extensive colonial possessions in other parts of the world.

"A. B.,"

Credit to "C. G. K.," Inwood, Ia. Credit to "G. B.,"

324. What is the origin of the phrase, "To speak for Buncombe?"

Ans.—The phrase, "To speak for Buncombe," originated with a member of Congress from Buncombe County, N. C.

G. B. TEXAS.

326. What is the Bulwer-Clayton Treaty?

Ans.—The Clayton-Bulwer treaty was negotiated by John Middleton Clayton, then Secretary of State in the Cabinet of President Taylor, guaranteeing the neutrality of, and encouragement to, lines of inter-oceanic communication across the Nicaragua or elsewhere.

HYMN TO SAINT JOHN.*

Moderato. p

N. LINCOLN.

Ut que - ant la - xis re - so - na - re fi - bris *cres.* Mi - ra

ges - to - rum fa - mu - li tu - o - rum, Sol - ve pol - lu - tis

la - bi - is re - a - tum, Sanc - te Jo - han - nes, Sanc - te Jo -

han - nes. Sol - ve pol - lu - tis la - bi - is re - a - tum,

Sanc - te Jo - han - nes, Sanc - te Jo - han - nes, Sanc - te Jo - han - nes,

Sanc - te Jo - han - nes, Sanc - te, Jo - han - nes.

* The old Latin hymn from which Guido Aretino, in the 11th Century, selected the syllables to be applied to the sounds of the scale. It will be seen that there are but six of them. Si was afterward added for the sound seven, suggested probably by the word Sancte; and the more euphonious syllable do at a later period was substituted for the ut, though the latter is still used in some parts of Europe. Notice the Italics.

THE KINDERGARTEN.

TRADITION has done as much for Froebel as history.

A CHILD has been called a "harp of a thousand strings."

FROEBEL never gave the world a psychology, but the fruits of a psychology.

THE kindergartner needs to discriminate carefully the individualities of children.

THAT which is universal in children is "the fundamental knowledge" of the kindergartner.

BE careful to illustrate the meaning of new words or expressions occurring in songs or games just presented.

PRESUPPOSING a child to be good often helps him into well being and doing; therefore hold the good you have and shut out the bad.

MAKE beautiful all about you, as anything from without may do harm as well as that from within. Harsh, unlovely surroundings call forth corresponding emotions.

WHILE the discipline of the kindergarten should be gentle and of a parental nature, it must be also firm; since changing the management of to-day when to-morrow arrives is detrimental to character-building.

ABOUT THE SAND-TABLE.

BY E. L. HAILMANN, LA PORTE, INDIANA.

IT is an open box, the size of the kindergarten table in use at the time. It has a depth of four inches inside measurement. In order to prevent the sand from spilling on the floor the box should be only about two thirds full. The sand should be sufficiently fine to pack well when moist, yet coarse enough to prevent the soiling of the hands. Moulder's sand is too fine, and marble sand is too hard.

The children stand while playing in the sand, therefore the height of the table on which the box rests should be accommodated to the average height of the children.

The sand offers a plastic surface upon which the children represent their impressions and conceptions of the landscape and of other matters.

A smooth, level surface should greet the children every morning, except for some special reason, *e. g.*, if they should desire to finish some thought-picture begun on the previous day. Neatness, order, care, and thought are as essential here as in other exercises of the kindergarten.

When the children have somewhat gratified the instinct of curiosity by experiments with the sand, *e. g.*, covering and uncovering the hands, making impressions of the hands upon it, moulding balls, piling it up, etc., the kindergartner may suggest something to do with it. When she has quickened the vague desire for activity on the

part of the children into an eagerness for the accomplishment of a definite purpose, the questions arise, "What shall we do?" and "With what material shall we do it?" After consultation, all together decide to lay it off in gardens, and streets, to make sidewalks, to plant trees, to build houses, railroads, telegraphs, and so on.

In these suggestions the kindergartner should limit herself to the powers of the children and to her own resources in carrying out the suggestions well. At the same time she should constantly lead the children to add suggestions of their own and to modify hers.

In order to secure a rich harvest of suggestions from the children and a spontaneous adaptation of material to their purpose, sympathy of feeling must exist between the children and kindergartner. Living, productive ideas germinate only in an atmosphere of love and sympathy.

In a future article I shall give a detailed description of some special exercises and of some devices for enlivening the work.

OUTLINE FOR WEEK'S WORK.*

BY M. E. C.

MONDAY.—Last spring we learned a song about a man who plowed the ground and planted his seed. I wonder if any one remembers anything this man planted. Corn? Grain? Very true; he did plant them both. And what do we call the man who does such work? Farmer. We will sing an old song about "The Farmer." Now, through all the long summer, while we have been away from kindergarten, the corn and grain sowed last spring have been growing higher and higher (exhibit full-growth cornstalk with ear in husk upon it), and you see the fruit,—we will call it so just now,—has ripened; so the farmer has cut the great stalks down, and pulled off the husks. These husks will all be taken off by and by, and then the farmer will have a great heap of ears of corn, just like this one. (Some child pulls away the husks, disclosing the ear, which being put with several others upon the tray are exhibited all in good time.) When the farmer's husking is finished the ears of corn will be thrown into a machine which shells the corn, that is it takes all these small corns right off the cob. (Illustrate the shelling, showing the corns and cob to all.) When the corn had been taken from the cob the farmer put it into his shed where all his grain is kept, and who should be there but a ———? Mousie. (Sing "Kittie White" and "Three Little Mice.") The farmer, finding that the mice were busy with his corn decided to send it to a large building that looks something like a barn, but it's not a barn, because in the inside is a great wheel, that turns "round and round." (Develop ideas concerning the power that turns the wheel; illustrate by pictures printed, or by hand drawings,—the mill; the wheel; the miller; the bags of meal, and other details that will add

* Copyright secured.

to the interest of the exercise.) This wheel, turning so many times, causes the corn to be crushed into meal (show specimen) which the miller puts in bags to be sent back to the farmer. (Nearly every child will have something to tell about the bags of meal seen, if not in the country, at city warehouses.)

At seats use the first gift in exercises, illustrative of "round and round" movements, beside emphasizing *one* of one color, *one* of another color, and so on. As an occupation draw upon the blackboard simplest pictures illustrating the morning talk; these to be crudely copied by children upon slates.

Tuesday.—Sing "The Miller" to the class, with piano accompaniment. Repeat the verses, explaining their meaning. Use second gift, with which all assist in building a mill upon the kindergartner's table; the mill can be built with cubes and cylinders, the latter forming posts about the door. With the balls play roll away bags of meal, after singing "Round and Round."

Occupation: Bead stringing, with the color arrangement of the first gift.

Wednesday.—Children taught to repeat the verses of "The Miller" (Mrs. Hubbard's collection), using movements.

Gift: Sticks laid in outline of the mill, changed afterward to anything else relative to the miller's work that children can recall.

Occupation: Sewing.

Thursday.—Thorough drill upon words, music, and movements of the new song-game, together with other songs.

Gift: Large square tablet, developed from cube of the second gift.

Occupation: Sewing.

Friday.—Introduce the song-game upon the circle with proper movements.

Gift: Model the little mice that ate the farmer's corn.

Occupation: Tiles.

FROM A KINDERGARTNER'S NOTE-BOOK.

Summary for First Month in a Kindergarten.

BY M. E. C.

Songs, Games.—Sunshine, dear—Roll the hands—Up and down—Sinking and rising—Bird songs (hop fly-rest)—Go over, come back—My ball, I wish to catch you—Up, up in the sky—Mother, good and dear—Good morning, good morning—Sing good by—Weather song.

Gymnastics.—Marching to piano music.

GIFTS.—*First.*—Color, form, number *one* developed through object talks and games in which balls were used with and without strings.

Second.—Form and material, through play and object talks with sphere and cube.

One stick.—Number, direction, position, supplemented by use of one round counter.

OCCUPATIONS.—*Drawing.*—Flat representation of balls in colors upon rough paper, changing location of "rounds" on different days.

Tiles.—Emphasis of colors of First Gift and number *one* through placing *one* row of red sticks, *one* row of blue, etc.

Beads.—One colored and one white; one colored bead and one mould; one white bead, one colored counter. Straws and various colored counters.

DISCIPLINE.—The stubborn member had learned, through sitting alone in a house formed by turning the screen across a corner of the room, the value of behaving in such a manner that she might enjoy companionship of the other children.

The slapping, scratching girl had had her hands and wrists loosely bandaged with towels tied by strings; a very sad ceremony, made impressive by the principal, who suggested the hands were very sick and could do no work.

The kicking boy had had his boots removed, and upon screaming lustily had been obliged to sit alone behind the screen until quiet and ready to work harmoniously with his playmates.

A lazy member lost the pleasure of working with the other children, but did the work alone at noon.

Children had brought from home, to illustrate their lessons, objects,—round or square,—made of wool, wood, and paper; also material, red, blue, and yellow of color.

Besides exercises with gifts, occupations, and songs, the beginning of love of plant-life had been awakened; an attempt at using language made; the necessity of personal cleanliness established, together with the accomplishment of very much individual discipline.

FROEBEL'S PRINCIPLES AND THEIR PRACTICAL APPLICATION.

BY FLORENCE CLAP, BALTIMORE.

Education must supply material and guidance, and Froebel has placed such material in the hands of kindergartners and mothers. The six gifts are the magic keys that unlock untold marvels and introduce childhood and maternity to a new land of enchantment. Buds and blossoms scarcely need to become the dwelling-place of fairies, birds and animals do not need the endowment of human speech to make them interesting, brook and stream speak with an eloquent language of their own. In the games the child's physical life is advanced, and in the songs imitative of human labor a love for usefulness is developed. This elementary education naturally leads up to the higher and scientific forms.

Thus the physical powers are roused and strengthened, and as education includes character the child's moral nature must also be nurtured. It is the inner life which

will be the determining force. The growth of the soul in the period of childhood has been little studied or observed, but we must believe that the process of spiritual growth goes on according to fixed laws, though we may not yet be wise enough to wholly understand them.

As man in his savage state is known to have worshiped the Great Spirit, so the child intuitively seeks for God. This is evinced by the simple questions that all children ask in some form: Who made the flowers? Who made the clouds? Who made me? They first find God in Nature, and the wondering reverence with which they hear that He made all the beautiful objects they admire and the animals they love is the germ of their spiritual life.

The soul thus receives its first impressions from outward things, and by an inward process converts them into thoughts and conceptions. The child sings its songs of thanks and praise to the Giver of all good, and thus it understands that these delights are to be received with joyful response. It realizes it is a part of this beautiful world. From the concrete it reaches out to the abstract, from the known to the unknown.

It is given to women to undertake the task of first educating little children. Froebel can direct their efforts with rare wisdom. He has given to the world a new interpretation of play, and has indeed elevated it to the dignity of a science.

Remembering the barrenness of expression that palled upon his childhood, keenly noting the limitations he encountered in school systems in his boyhood and continually hampered by his inability to adapt prevailing methods to his own needs in teaching, he thoughtfully reconsidered the subject of education. His attention was specially directed to the very first needs of the child. He studied its infantile motions. He perceived its necessity for physical activity. He observed the first efforts to express

its meaning and its reaching out to life about it. Through the senses the child receives its first impressions, which are naturally crude. It is not long before the infant connects its impression with its desire. A most familiar illustration of this is the eagerness with which a baby recognizes its out-of-door garments. Its arms and body and baby utterances all translate its thought. It knows that sunshine and variety follow the donning of its cap and cloak. It quickly perceives all sounds, songs accompanied by action exhilarate it. Soon it struggles to be free from the mother's or nurse's arms; it crawls and creeps; becomes acquainted with objects about it, feels them, pulls and breaks them; distinguishes by painful experiences the difference between hard and soft things. Its passionate resentment, if its food does not suit it, has a deeper significance than audible objection. The child's individuality asserts itself. Though it can be called a physical want expressing itself violently, it is the natural demonstration of individual taste, like or dislike, enjoyment or pain. So even the sense of taste holds a legitimate place in the child's culture. It naturally advances from its physical or animal expression to the more dignified position of judgment and appreciation. Therefore standards soon become important. Imitation is soon developed. This implies observation, and a more advanced effort of the child to express its thought. The doll is the early medium of expression. The child repeats its first lesson in soothing its doll to sleep, and this effigy meekly and graciously goes through all the phases of life its tiny parent sees fit to imitate.

The outer world soon yields a new charm. The bird, the cock, the horse, dog, or cat each has a special claim to notice. The utterances of the child crudely intimate its knowledge of the sounds emitted by each animal. Thus the education of the ear progresses.

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Now all this life of infancy was closely studied by Froebel, and he perceived the need for something pertaining to education which would cover the period that elapses between infancy and the sixth year of childhood. That those years to both rich and poor children have been and are filled with weariness and sorrow none can deny. Unless we reach down to the child and enter into its life much of it must be a tearful blank. But Froebel's gifts have sent a ripple of merry, childish laughter through the world. Bright eyes dance,—tongues, hands, and feet unite in song, work, and play, and demonstrate his far-reaching wisdom.

One of the first instincts of a child is to clasp something in its hand. It would naturally prefer something round and soft. A soft ball fulfills this requirement, and one finds that the ball is the oldest of playthings. There is much that can be done with it. So, therefore, Froebel chooses it for his first gift. As the various objects selected by him for instruction were absolutely given by Froebel to the children he taught, he properly designated them as gifts. The name has been happily retained, though the custom has been discontinued for practical reasons.

The ball possesses form, simple and distinct. It is easily held. The infant's fascinated gaze into a flame or light indicates an instinctive love for brightness or color. Thus a red ball possesses a special charm. This love of color is utilized. The first gift includes six soft balls,

made of the primary and secondary colors, red, blue, yellow, green, orange, purple.

There is also in the ball the possibility of motion. In the games connected with it the child exercises the muscles of his body. Also in rolling and throwing the ball the eye marks the direction in which this favorite plaything is to go. And in this way he aims to accomplish a result. He has a purpose. Thoroughly unconscious of the philosophy of the act, yet it is a first lesson in practical effort toward result. Furthermore he acts in concert with others. There is the inspiration of united action with children of the same age. Music gives its crowning charm, and the child rhythmically describes and acts out the deeper significance that lies in the balls. Spontaneity is not sacrificed because the kindergartner alone applies its philosophy and the facile child simply responds to the method.

The knowledge of colors is also developed, and no one can fail to perceive its importance. Not only does it possess an æsthetic value, but a most practical one, as instanced in the frightful possibilities that may result from an uncertainty in detecting green from blue lights. And it is a well established fact that the color sense must be cultivated in some children. Fine sense of color has given to the world its famous paintings. The knowledge of form alone would not make the canvas tell its complete story.

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Froebel's law of contrast is constantly reiterated. We all realize that the strongest impression is received from contrast. For instance the idea of darkness becomes real when we conceive of light, joy when we think of sorrow, black when we think of white. And there is the law of connection. There are all the intermediate shades to be discovered between black and white. There are all the gradations of joy and sorrow, darkness and light.

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AUTUMN SONG.

BY M. E. C.

BLUE skies, cool skies,
Tell us summer days are done :
Gay leaves, sad leaves,
Swirl in wild, October fun.

Blue eyes, brown eyes,
Spy every op'ning burr ;
Wee ones, great ones,
All gather without demur.

Dull days, drear days,
Shadow Winter's coming blast ;
Young hearts, old hearts,
Sing while jolly nuttings last.

— *Journal of Education.*

FLUFF.

BY IDA F. B.

NEITHER WILL THIS POETRY (?).

ADISPUTATIOUS man is Stubbs
Whom business did not suit.
When he an orchard bought, I asked,
"To raise what kind of fruit?"

"Why," interrupted Jones, near by,
"You know his predilections ;
So there's no need to ask ; of course
He's going to raise objections."

"O well," retorted Stubbs, "you think
You're sharper than a file.
But I can raise the wind, while you—
You cannot raise a 'smile.'"

THE TOMBOYS.

The live-long day with song and shout
The twins poor "mam'ma" tucker out.
But lo! at night each stops her din,
And lets poor "mam'ma" tuck her in.

What is it that twilight gathers?

"This was the most unkindest cut of all," as the poor relation
said when he was given a bare bone.

Why a woman should wish to pass herself off as being younger
than she is, and thus lose the credit of looking young for her years,
has always been too profound a question for us to fathom.

Empty words—void, vacant.

All the hospitality some people ever offer consists of excuses.

Arabella affects business language and when she got a sealed pro-
posal the other day, she called it a bid for a contract.

Those who claim that "Charity begins at home" should remem-
ber that "A good beginning makes a bad ending."

We always feel when in the dentist's chair, that instead of giv-
ing an eye for a tooth, the dentist ought to take an eye (a black
one).

They say nearly everything is adulterated, and we believe it, for
we find it hard to get even unadulterated praise.

A CROOKED STICK STRAIGHTENED.

BY WINTHROP.

IHAD an ugly, unruly boy in my room, and he gave
me more trouble than all the rest of the class. All
through the different grades of the large grammar school
he had been a terror to his teachers, and he was hurried
on to the next teacher with surprising alacrity and pre-
cision. He never lacked promotion. When I inherited
him I felt as if Nemesis had overtaken me, and just how
to control him and secure any kind of work from him
was a problem I long wrestled with. For several weeks
he was the terror of the room, and my reputation for
good order and dignity was, I felt, fast disappearing.
The boy would not obey unless he felt like it, and punish-
ments had no effect on him. He was there, he knew he
was there; he had a reputation to sustain; he had earned
it by several years' close application to wrong-doing, and
he meant to maintain it at all hazards.

It is unnecessary to narrate his pranks; every teacher
has had such boys, and will readily recognize this one.
Every plan I evolved for the regeneration of the boy
proved abortive; he wouldn't reform. Finally, by acci-
dent, I stumbled on the cure. I am not ashamed to say
that it was an accidental plan, for it was one of those un-
expected things that philosophers tell us are bound to
come to pass.

I discovered that he was interested in his drawing, or
rather was interested in sketching odd bits of scenery, or
objects in the room, not even omitting his respected
teacher, who was a typical schoolmarm and wore glasses.
I resolved to make the most of this one talent,—if talent
it was,—and so one day, when I was in my best and
sweetest mood, I asked the Terror if he would not draw
a plan for some shelves I wanted put up in my closet.
He assented, and the sketch was neatly and accurately
made. There was a new look in his eyes, and a new
expression on his face when he gave me the paper on
which his drawings were made.

Then I advanced slowly and cautiously. I needed some
maps made, following a new invention of mine in cartog-
raphy, and again I employed the Terror, and again the
result was encouraging. The maps were models of neat-
ness and precision. I judiciously praised him, and ex-
hibited the maps to the class and called for copies. None
ever equaled his, and his joy was complete.

We were studying the continent of Asia, and the Terror never had his geography lesson learned, but when I suggested that if he were to keep up his reputation in drawing he must draw the details of the country he was sketching, geography became a new study to him, and he easily made excellent progress in this branch. To do this he had to forego some of his "fooling business," and it was given up simply because he had something more to his liking to do.

In fine, and to the point, the Terror came out of his chrysalis state a new creature. His old ways were left, and he readily adopted the better method of doing and living. From a slouching, unkempt, uncouth, shambling, horrid boy, he emerged into being a respectable, neat, tidy, order-loving, painstaking, and industrious young man. I had found that there was something he could do, and something he liked to do, and that was all there was to it. By doing something worth the doing he had no time or liking for doing what was not worth the doing, and mischief became no longer the object of his existence.

LANGUAGE TALKS.—III.

BY LULU M. BAGLEY.

AT the close of the term, partly for the sake of review but particularly as a means of interesting the children, we published a paper. I say published, because the more form attached to the exercise the more pleased and important the children feel. Its title was *The School Journal*; the publishers were "Teacher & Co."; the terms "gratis." It was usually composed of five, six, or seven sheets of foolscap. Members of the fourth and fifth classes were regular contributors, and the editors were, with the teacher, the two pupils who gave the greatest number of *neatly written* exercises the preceding term. Peculiar fitness, we must acknowledge on which to base literary (?) promotion, but while we knew that all could aspire to, and were capable of, careful mechanical work, we felt that many, doing their best, would be discouraged if placed in comparison with brighter or more active minds. The contents consisted of original stories, letters, advertisements, word-pictures, and *selected* poetry. The articles were written on one side of narrow strips of paper, of uniform size, so that they could be neatly pasted into the columns, for the *Journal* was not printed, and but one copy was issued. This was one of the "last day" exercises, and was a source of much pleasure to contributors as well as a stimulus to the whole class as it was not merely a pastime but a practical result of various language exercises.

Once a week the children write to each other, and the pupils receiving letters are expected to reply the ensuing week. Sometimes they are allowed to follow their own sweet wills, but oftener the matter of the letter is suggested by the teacher, as when the class had finished the

study of a country,—France, for example,—slips of paper, with names of important cities or localities written thereon, were given the children who were expected to write an account of an imaginary journey, descriptive of section whence they wrote. Envelopes were furnished the children and one or two of the best letters were sent, through the mail, to superintendent, parent, or former teacher of the pupil. The other letters went through the "School Post-office."

A box about twelve inches square, with an opening on one side, serves as our post-office; one of the boys acts as postmaster, and, as he delivers no letters that have not the necessary postage, the children have learned to be careful in placing the proper stamp. My first idea was to have them use cancelled stamps, but fearing that this might possibly weaken their impression of the law, I decided to let them put in the proper place the figure denoting the value of the stamp. The correspondents understand that a letter with an item of the address incorrect cannot be delivered. I told them that I should have to place such letters in the waste-basket; thereupon one of my bright boys suggested that we place, on the other side of my desk, a box, to be used as the Dead Letter Office, in which all such letters be put. Of course I accepted the amendment.

In these written exercises the teacher has a vast amount of corrections to make and indicate that cannot be done in school; therefore, thinking that the five or six common signs used by proof-readers in manuscript corrections of practical value to the pupils, they have been taught, as necessity required, and where the teachers of a building agree upon their use, save much time by systematizing this correction work.

The reading lesson affords opportunities for a variety of oral and written language exercises. The paraphrasing of sentences by substitution of synonyms, transposition from poetry to prose, the analysis of words are all helps to the understanding of the text, and the *art* of reading aloud is in itself a language.

The daily intercourse between teacher and pupils furnish material sufficient for unlimited courses of *conversation lessons*; and teachers know how often, in spite of the daily drill in the schoolroom, are violated each and every rule fashioned by Lindley Murray.

To use language well is to speak, read, and write well. Do the children who leave our schools fulfill these requirements? This is a trite question. If we wish to cultivate pure language we must cultivate pure thought; cultivate a love for pure reading; give the children good reading, and direct them where to find such reading. Then will not only thought control expression, but the child will be enriched and ennobled by the thought which has for the time dominated in his mind.

With all our work in language we must bear in mind that children learn more from example than by precept; nowhere is the influence of speech more potent than among

language, as in other things; the teacher whose diction approaches perfection will be more critical in noticing and correcting errors of speech in the children. This matter affects even discipline. If care is used it will not often be necessary to follow a *request* by a command. A good reason for using requests in school is the example it gives the children in their intercourse with each other. Teachers who use commands too much are apt to become scolds. However, this is not always the case, and commands may be given in a quiet, gentle way, for surely a "low, sweet voice is an excellent thing" in a teacher.

GEOGRAPHY AND LANGUAGE COMBINED.

BY ANNIE E. HILL, BOSTON.

HOW to kill two birds with one stone is a problem upon which every teacher is working. How one class killed several birds may be of interest.

We had been studying the surface of Europe. When the hour for language came, paper was distributed, and the girls were told to write a brief account of what they had learned concerning the subject.

The selection of a "title" was left to each girl's choice. Some were as follows: "The Surface of Europe," "What I know about the Surface of Europe," "Our Last Topic in the Study of Europe," "The Mountains and Lowlands of Europe."

These papers were exchanged and marked by the class, each paper being examined by two different girls, that errors not seen by the first examiner might be found by a second.

Each pupil then received her own paper and wrote correctly upon her slate the words misspelled and the sentences in which errors occurred. In this work she was at liberty to use her geography and dictionary.

Now, to make sure that all misspelled words were really learned correctly, the girl having the greatest number of errors in spelling, took her slate and copied the words correctly upon the board. Any girl who had different words, added to the list, and so on until every word misspelled by any member of the class had been placed before the pupils. At this point the lesson closed for that day.

At night the girls were told that it was expected that they would make themselves perfectly familiar with every word on the board before the next day's language hour. Nothing was said as to what was to follow, but at odd moments the girls were seen studying the words.

That night the teacher prepared a letter, presumably written by Jennie Jones, in Geneva, to her friend Sadie Shaw, in Boston. This letter contained as vivid a picture of the mountains and lowlands of Europe as the teacher could make, and told Sadie how Jennie and her father had traveled over the continent.

In this letter *every word misspelled by the girls in their abstracts was embodied.*

The next day's language hour came. Fresh paper was distributed and the girls were told that they were to write a letter from dictation. The words upon the board were covered and the work began.

When the girls saw what "the game" was, the writing went on with new interest, though now and then there was seen a crestfallen expression, as here and there a girl discovered that she had failed to make herself perfectly familiar with the words placed upon the board.

Before the next lesson the teacher wrote the letter correctly upon the board, as a model for the marking to be done by the pupils.

Those who had letters nearly perfect became teachers of those who had made many errors. They drilled upon misspelled words, and explained corrections; then the whole class carefully copied the papers, which were placed on file.

All words that no girl had misspelled were erased from the board, and the rest were allowed to remain. In a day or two some simple exercise brought into use the words left over, and we were ready for something new.

What had been accomplished by the week's work in this line?

1. A test of knowledge of the subject had been made.
2. Every misspelled word and incorrect expression had been mastered,
3. Drill on "letter forms" had been brought in.
4. An oftentimes "dry" subject had become interesting and vivid.
5. Subsequent "journeys in geography" showed that the girls had developed added descriptive power.
6. The teacher's ingenuity had been taxed, and she thus had been strengthened.

MODERN METHODS IN ARITHMETIC.—(II.)*

BY A. E. WINSHIP.

5. Teach with special regard to previous instruction :

4 and 1 are 5	5 less 1 are 4
etc.	etc.

In making the record omit the name of the objects, but in all their work have it used. In reading the record, which may be called a "table" without serious harm, have them put in the name of some object that they have never had in their number study,—something outside of the schoolroom is better for the imagination. The table can be recited if it is no trouble for them to learn it, but merely as a statement of what they have done with five objects.

6. Teach the signs for addition (+) and subtraction (—) and equality (=), which in this case are the same as "and," "less," "are" or "is." In making the record, or writing the table, use the signs hereafter, but have them read as though the words were used as before:

$$5 + (\text{and}) 1 = (\text{are}) 6; 6 - (\text{less}) 1 = (\text{are}) 5.$$

* Copyright, 1887.

Teach $5 + 1 = 6$	Teach 2 threes are 6
etc.	3 twos are 6
$6 - 1 = 5$	$\frac{1}{2}$ of 6 is 3
etc.	$\frac{1}{3}$ of 6 is 2

Teach one third of six in much the same manner, and with the same absence of formality and definition. They will mostly know it, but if not, let there be no end of story-telling that uses one half and one third of six. Have nothing to do with the half or third in the abstract. It is the half and third of six of which we are studying. Teach the writing of $\frac{1}{3}$.

There is no danger of asking too much of a child if given but one new thought at a lesson, if he weaves that thought into his own language through story-telling, if the numbers with which he deals are entirely familiar. The child's mind is ready for new activities, seeks them, even craves those within its own range.

Teach combinations in which they have no objects in hand, in which all the class give attention to you, and write the answer upon the slate.

Examples.—How many are 2 apples and 1 apple and 3 apples? How many are 6 peaches less 2 peaches; less 3 peaches; and 4 peaches? How many are $\frac{1}{2}$ of 6 dogs less 2 dogs?

There is room for a good many combinations with the numbers already taught.

As soon as the children can use these combinations reliably, give them in the abstract. Go slowly always in dropping objects for pictures, in dropping pictures for imagined objects, and more slowly in dropping these for abstract numbers. *Pay no premium upon rapidity.* Do not seek it. Have no hands raised. Let accuracy and confidence in their work be sought. It is to this end that we suggest no oral answers to these combinations, but the writing of the answers.

7. Teach with care, but with no unnecessary delay :

$6 + 1 = 7$	$7 - 1 = 6$
etc.	etc.

The table is merely the record of what is learned through story-telling. Their interest is in their ability to tell a good story promptly. As the child tells his story he places the objects as we indicate by the use of zeros. He knows all about 6 and its combinations. Of course he knows that the next number is 7, and he is taught to make the figure, if he cannot already make it. He then tells a story after this fashion: "I had five cows to drive to pasture, and John had two, and we drove them together,—so John and I drove seven cows to pasture. Five cows and two cows are seven cows."

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He takes his five little toy cows and stands them out on the table, and then brings out two more and places them beside the five, and then puts the seven together.

Do not let the story-telling become tame. Have less

and less of it. Let there be a deal of activity in it. Do not think that every one of the combinations in seven must have a story by each child, or even by any child. Always presume that the child has brains. Honor his ability to think in numbers. Be careful, however, not to crowd him. The moment there is uncertainty in the process, or unreliability in results, there should be a pause, and renewed activity in review.

Explain little, if any. The little folk are going slowly enough, by this method, to see it all for themselves.

Great moderation with the lower numbers will make very rapid advance possible with numbers above six.

Practice on combinations as indicated under 6.

The use of objects is merely incidental in arithmetic. The child must be divorced from them as soon as he is absolutely sure of the processes. There is a prolonged use of objects that is as bad as the old-time habit of counting the fingers.

8. Teach with all the care previously indicated :

$7 + 1 = 8$	$8 - 1 = 7$
etc.	etc.
2 fours are 8	$\frac{1}{2}$ of 8 = 4
4 twos are 8	$\frac{1}{4}$ of 8 = 2

Teach $\frac{1}{2}$ and $\frac{1}{4}$ of 8, and the writing of $\frac{1}{2}$ with all the care indicated in teaching $\frac{1}{2}$ of 4. Most of the story-telling should be upon 2 fours are 8, 4 twos are 8, $\frac{1}{2}$ of 8 is 4, $\frac{1}{4}$ of 8 is 2.

Practice upon combinations such as, $\frac{1}{2}$ of 8, + 5, - 2, + 3.

Teach the use of the word "times," and the sign \times , and use them in place of saying, "3 twos."

9. Teach with no unnecessary delay :

$8 + 1 = 9$	$9 - 1 = 8$
$7 + 2 = 9$	$9 - 2 = 7$
etc.	etc.
$3 \times 3 = 9$	$\frac{1}{3}$ of 9 = 3

Teach :

$9 + 1 = 10$	$10 - 1 = 9$
$8 + 2 = 10$	$10 - 2 = 8$
etc.	etc.
$2 \times 5 = 10$	$\frac{1}{2}$ of 10 = 5
$5 \times 2 = 10$	$\frac{1}{5}$ of 10 = 2

The writing of 10 needs to be taught with more care than the previous figures.

Practice with combinations, such as, $4 + 3$, - 5, $\times 4$, take $\frac{1}{2}$, take $\frac{1}{3}$, $\times 3$, take $\frac{1}{3}$, $\times 5$, take $\frac{1}{5}$, $\times 4$, + 2, - 5, + 4, take $\frac{1}{4}$.

It is useless to say how much time will be required to teach the combinations of the first ten numbers. It depends upon the character of the class, the zeal of the teacher, the size of the class, the length of time given to the exercise daily, and the experience of the teacher with children. The teacher should strive to be a model in

this method. There is no gain in going slowly when the work is so well done that they can advance without carelessness or inaccuracy. While "haste makes waste," undue delay pays a premium upon indifference.

The teacher, principal, superintendent, and committee should study carefully the possibilities of advancement with each class, seeking the happy medium between undue haste and undue waste of time.

TIME-STROKE AND TONE DURATION.

BY W. S. TILDEN, FRAMINGHAM NORMAL SCHOOL.

"**M**USICAL sounds may be long or short," is a fundamental time principle in all the old elementary treatises. True enough; and every well-regulated succession of sounds is made up of such as have strictly proportionate durations. But we all know how difficult it is to preserve exact proportions of length, especially in long-drawn tones, or slow-moving legato music. Some criterion by which relative duration may be estimated is found necessary; and to this end the division of time into short, equal portions by counting, beating, etc., must be employed.

We observe, however, that these counts, beats, etc., are not the time; they are simply *instants* which form the boundaries of equal or measured portions of duration. Hence we teach that the count or beat must take no time in itself,—it must be instantaneous; the time all lies between one beat and the next. So when we say, in common language, that a sound is one beat long, we mean that its duration is just equal to the time included between two beats,—between two of these fixed points along the stretch of duration which mark it off into equal parts.

Such a sound, then, must begin at the very instant of the first beat, and must cease soon enough to permit the beginning of another similar sound at the second beat. But in musical practice it is always found that the beginning of a sound chiefly marks its agreement with measured duration, and that the ending is very feeble in this respect; because the life of a tone is so much more apparent in its onset than in the moment of its ceasing to be.

All good vocalists give great attention to correct striking of tones; for this it is which gives that delightful spirit and point to singing, in comparison with the careless shuffling from tone to tone heard in indifferent performers. The pianoforte is more satisfactory than the reed-organ largely on account of the clearness of its *time-stroke*.

If we are to attain in school music to anything like precision in the measurement of duration, it must be by strict attention not so much to the length of continuation, as to the beginning,—the "attacking portion" of the tones,—to the *time-stroke*.

This points us to some features of the time-names and their use, which should receive thoughtful attention. The consonant *t*, which is so largely used in time-names, is most excellently adapted to precision of stroke; no other

element in our language, probably, being as good. It is used in all the tonguing exercises for instruments of the trumpet class, where the greatest clearness in this respect is demanded.

As time-names stand for strokes, or *mere beginnings*, and not for durations (except incidentally), it follows that, in order to reap benefit from their use, they should be spoken, not sung or monotoned; and spoken, too, with a sharp, quick utterance. The syllable *tä*, instead of being drawled out as we often hear it in classes, should take no more time in speaking than the word *tick*. Beginnings should be instantaneous; let the motion, or time-word, which stands for beginning, be as nearly instantaneous as possible.

There is one point, even among those who otherwise use the speaking voice correctly in applying time-names, where there is some dissimilarity of practice. It is in cases of the added vowel, when the tone is prolonged to the next part of the measure; e. g., *tä ä* or *tä äfä*. Some classes, instead of speaking out the names which correspond to the parts of the measure clearly, as at other times, drawl the voice from one part to the other, thus,—*tä ä* or *tä ä fä*,—evidently seeking in a single effort to couple the idea of prolongation along with that of time-stroke, by a process foreign to the speaking voice.

Would it not be a better way, brethren, to allow the time-names simply to show the swing of the movement, by defining clearly the beginning of each part of the measure, and by pointing out what parts, or fractional parts, belong to each note? When this is done, the essentials in the rhythmic structure of the piece have been provided for, and the matter of holding the longer tones would seem to come as a part of the singing, rather than the spoken exercise, when we unite the two spoken parts of *lä ä*, or of *dö ö*, into one unbroken tone of equal length. In other words, would it not be best to let the time-names attend principally to *time-stroke*, and so aim at the greatest precision in that without which there is no good time-keeping?

SENSELESS EXERCISES.

BY JOHN Q. RANDOLPH.

IT has been the fashion in some quarters,—and such things sometimes find a place in books,—to write black-board exercises for children which consist merely of a conglomeration of notes and rests having no ascertainable musical form or idea except that the quantity in each measure is right. The following is a specimen of this sort of thing:



Perhaps the pupils can learn to sing this correctly; but is no matter whether they can or not. If there is any-

thing that can reduce them to absolute musical idiocy, it is the effort to sing such stuff as this. The rendering of the written pitch and time in the above exercise has no more significance than does the rhyme in the famous composition of the boy who wrote:

"The wind blew down our old well-sweep;
Father and I put it up again—sheep."

PENMANSHIP.—(II.)*

BY W. F. LYON, YOUNGSTOWN, OHIO.

IN the first grade the slates should be ruled in staves, consisting of six lines and five spaces, and each space being three-sixteenths of an inch and the staves three-eighths of an inch apart. The copy on the blackboard should not be longer than to require one staff for its writing. Upon the blackboard the lines of the staff should be one and a half inches apart and the staves three inches apart. On some accounts it is well to have the two upper lines red, the next two blue, and the lower two red. Position at desk should be taught at once, and the slate used in the position that the book will occupy later. There is very little difficulty in securing the position indicated above and in holding the pupils to it. Great care must be exercised in having every pupil take position promptly and in seeing that it is exactly right. Directions should be given in clear language, in a kindly tone, and in a positive manner.

Our rule is, at the word "Ready" all take pencils, placing them in position for writing, with the point upon the slate just where the writing is to begin. At the word "Face" every pencil is placed in the groove in the desk, very quickly, but quietly. At the word "Look" the pencils are taken in hand and each pupil looks at the teacher. This exercise is to get their attention and give them facility in obeying directions.

Everything is now ready for the lesson. The teacher asks them to count the lines in the staff upon the board as she points to them, beginning at the top and counting down to the fourth line. They then find this line on their slates and mark it by a little line to distinguish it from the others. She then draws a slanting, straight line from the first to the fourth line; she then talks about this line, asks questions about it, and fixes it and its slant upon their minds. They then make such a line. Let them exchange slates and talk about the lines upon them. Have them practice till they can make one straight line correctly; when they can do this let them put another beside it; let them make several groups of two, then groups of three, then four, finally of five. Our experience is that the straight lines can be well made in a week or ten days. The right curve may then be introduced. Begin on the fourth line, move upward and well to the right. Work upon this alone for some time, proceeding

in the same manner as with the straight line. When this is mastered, connect it at the top with the straight line, and make the two together. Count one for upward stroke and two for downward; speak words *one, two*, promptly, with a slight accent on *two*, so they will move quicker on that. In this way they will learn to strike at the base line instead of feeling after it. Now add another right curve and we have a small *i* three times as large as they will use in their regular work. They will have a correct form indelibly fixed upon their minds. They will also have found a way to move their hands which you have not told them anything about, and you have followed the principle, "Never tell a child what he can find out himself."

When the small *i* can be well made, three spaces high, change that to two spaces, and practice upon this in the same manner as upon the previous form. Look well after position, the form of the letter, its slant, the holding of the pencil, and the execution. By adding another *i* to the one already formed, we have the *u*, and by changing the last part of the *u* slightly we have *w*; changing the first two curves of *u* from right to left, we have *n*; make three left curves and three straight lines, and we have *m*; connect the first part of *n* with the last part of *w*, and we have *v*. By using this process of letter-building, using what the child has as a basis, and adding to that, little by little, something entirely new to him, we keep his interest, and the writing period will be the pleasantest of the day.

The thirteen short letters should be made not less than two spaces high, until the semi-extended letters are reached, after which they may be brought down to one space. In one year the child should learn to make all the small letters accurately, and should have a fair knowledge of capitals.

The second grade should use long, well-sharpened lead pencils and books ruled in staves of six lines and five spaces, the lines one eighth of an inch apart; and the staves one fourth of an inch apart; the third and fourth lines blue, the others red. Using the new instrument upon a new surface will make it necessary to go over much the same ground as was gone over the first year. New exercises may be invented, but the thirteen short letters should be made not less than two spaces high, until the semi-extended letters have been reached. Words may be used earlier in the second than in the first year, and longer words. In both cases, as soon as letters enough have been learned to make a word, they should be put together, but no letter should ever be used in a word that has not been well studied separately. As soon as the child takes the lead pencil, he should be taught the correct way of holding it, which he will readily adopt if the previous training with the slate pencil has been right; that is, if he has been taught to use it pointing over the right shoulder. The first thing aimed at should be perfect pen-holding.

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BY W. WHITMAN BAILEY, PROVIDENCE, R. I.

OLD Santa is coming,
He's on the way here,
In the cold, frosty night
Ring his bells silver clear,
And hark! yes, 'tis surely
The patter of deer.

I hear them all pawing,
Impatient to go,
The air it bites keenly,
And deep is the snow,
For such is the weather,
When Christmas trees grow.

Oh! could I but guess
What he brings to each boy,
And to every sweet girl,
In the shape of a toy,
How much it would add
To my evening's joy.

Why don't dear old Santa
Just ask me to say
What every one wants
On the following day,
And not go to work
In this hap-hazard way?

For two little children
Have whispered to me,
Precisely what fruit
Should be borne on the tree;
Now, can they and Santa
Be sure to agree?

How can I inform him?
Ah, me! it's too late,
He's jumped in his sleigh,
For his hurry is great,
And left me abiding
The issue of Fate!

THE GOOD MAN'S LOT.

BY LUCY AGNES HAYES.

LONG for words to utter what he feels;
To yearn tow'rd God and all his wondrous works
With love and admiration infinite;
To see the good and do it as he sees;
To struggle fiercely with a deadly sin
That strives to pull him downward to the pit;
To be unthanked, misjudged, derided, blamed;
And yet to love and trust, and work and wait.
Such is the good man's lot in this, our life.

BLIND BOYS PLAYING BALL.

(Written for boys.)

BY PROF. C. M. WOODWARD,
Washington University, St. Louis.

WHEN I was in Louisville, Ky., a while ago, I visited the "Institution for the Blind." While walking across the grounds I saw some boys under the trees playing with a bat and ball. I asked, "What boys are those?" "They are blind boys," said the superintendent. "But what are they doing?" said I, thinking there must be some mistake. When he told me that the blind boys regularly played ball, I could hardly believe him, and begged that I might be allowed to see them play. He said the boys would play after dinner for my special benefit.

I spent the morning in the school and work-rooms of the blind boys and girls, and I saw a great many wonderful things said and done. One of the strangest of all was a *kindergarten with blind pupils*. They were making figures or patterns from a copy by putting plugs in holes. The plugs had square or round blocks on their ends. But I set out to tell about the base ball, not the kindergarten, so will skip the dinner and take you out under the trees where the game is to be played.

Five or six of the best players were to play, and I believe that all but two of them were *stone blind*. The two could only see a little, like the trunk of a tree, a man, or a gravel walk. I do not think they could see a ball on the ground or in the air.

They took turns at the bat, and each one was anxious to make his bases. Their way of pitching and catching was this: The pitcher stood about six paces from the batter, while the catcher sat *squarely on the ground immediately* behind the bat. When all were ready the pitcher would count: "One, two, three," and gently toss the ball. The batter would, at just the proper moment, swing his bat, and the catcher would spread out hands and feet to stop the ball. He seemed to *hear* the ball as it passed the batter (and it generally did) and struck the ground, and it was most surprising to see him catch it in his arms on the first bound, and yet *perfectly blind*! If he failed to stop the ball, he would pursue it on hands and feet as spry as a dog and almost as keen on its track. Either he could *hear* the ball roll along the grass, or he could judge from the nature of the surface and the known speed of the ball just how it would roll. His hands would sweep the ground with great rapidity, and when he had the ball he would jump on his feet and rush for the home base.

With the exception of the home base, all the bases were trunks of large shade trees. I was astonished to see how rapidly the boys could run. They just *flew* over the ground, making a great stamping on the smooth earth, until they were within five or six feet of a base, and then they would feel up to it. Not once did they run against a tree, though it made me shudder to see how near they came to doing so.

Occasionally the batter would make a good hit; then all hands but the runner went in search of the ball. As soon as he had made his run he would join in the hunt. They always started off in the right direction and did not hunt in each other's tracks. Once the superintendent helped them to find a ball that went some fifty yards, but generally they found it themselves.

Though this game was played for my benefit, the well-worn turf gave abundant proof of the fondness of the boys for the sport during their hours of play.

SPECIAL STUDIES IN THE PRIMARY SCHOOL.

BY KATE L. BROWN.

NO one who loves Nature sincerely, there is no occupation more delightful than that of instructing children in the elements of the natural sciences.

As we look at the sturdy way in which they deal with these subjects, the conviction strikes home that childhood is the time in which to lay the foundations of scientific knowledge. The time is not far distant when the elements of the natural sciences will claim as real a part of the school program as reading, arithmetic, or spelling.

Perhaps the most important attainment of the child is the power to read with ease and intelligence. He must be able to enlarge his own limited circle by sharing the experience and thought of others as recorded in books. He needs to use the pen readily, and he cannot afford to be without the quickening power that comes from a steady and varied drill with numbers. These facts must never be ignored by the most ardent supporter of the sciences.

The question then comes, how shall this special work be done without infringing upon the rights of the common branches? This work can be done only by deliberately setting aside a portion of time for it, and by a judicious arrangement no legitimate interest need suffer. Let some one line of observation be carried out and supplemented by home research, and both teacher and pupils will be surprised at what has been accomplished.

It often happens that a little of this special work will prove a quickening power in the other studies. Children who find the ordinary branches dry and uninteresting often become thoroughly aroused by the simple lessons in botany, physics, or mineralogy, and return to their ordinary work with new interest.

But stated work in the sciences is not enough. The teacher must create and sustain in her school both the "scientific atmosphere" and the "scientific spirit." There is much general and incidental work that may be done, that need take very little of ordinary school time. Our object must not be so much to give the children certain knowledge, as to cultivate the habit of looking into things. A child whose eyes are open to the different phenomena of Nature, and who is curious to see and know more, will become possessed of all the facts he can use in practical life. It is a good thing for the children to feel that their teacher is interested in everything that interests them. They should be encouraged to bring to the schoolroom everything that has seemed at all beautiful, curious, or interesting to them. Set them to work collecting stones, crystals, shells, mosses, grasses, leaves, flowers, pictures, anything to awaken and sustain their interest. Encourage them to observe these objects closely, and describe their peculiar features. Point out certain distinguishing marks yourself, and let them hunt for specimens containing like marks. You will be surprised to see how acute they will become. It is also a benefit to a child to keep a record of personal observations. Some years ago a little fellow became interested in the weather changes, and began to record something every day. At first these accounts were very brief, as, "Cloudy to-day"; or, "Very warm"; or, "We had a snowstorm." As years passed by, the entries became more minute, showing closer observation, and a growing thoughtfulness as to causes. To-day, the recorder, though still young, has an important position in charge of a weather station, and a growing reputation as a meteorologist.

Get the children interested in some line of observation. For example, let them note the record of the thermometer every day at a certain time, adding general points as to sudden changes, clouds, winds, storms, position of sun, etc.

In one school of our acquaintance a very pretty journal of events was kept during last year. The first violet, blue-bird, or grass blade, the flight of wild birds, the first snow, or any little natural phenomenon was recorded. Some of these observations led to valuable object and language exercises, as follows:

"This afternoon, when Amy and Maud and I were coming to school we saw a currant bush growing in an old elm."

(Recorded by Carrie, aged ten.)

Query: How did it get there?

[Lesson on the carrying of seeds and soil by the wind.]

"Last night when I was using my hose-pipe I saw a rainbow in the spray."

(Recorded by Willie, aged nine.)

Query: What caused it?

[Lesson on the refraction of light, illustrated by the use of the prism which hangs in the south window.]

The children were also set to watching birds, having become intensely interested in them through John Bu-

roughs' exquisite "Bird Enemies" and "The Tragedies of the Nests." One little fellow, formerly a great runaway, became content to stay for hours within home limits, watching the birds to see how they hopped or walked, and whether they flew high or low.

By using such means to arouse and interest you will create the "scientific atmosphere," and by cultivating the fullest self-reliance and patient industry the "scientific spirit" will not be wanting in the children.

All this of which I speak is work done mainly outside of school prompted by the teacher who gives a word here and there, is always ready to admire; and, above all, is not averse to having her schoolroom "littered with all kinds of rubbish."

There is definite work in school hours that will prove most delightful. At the earliest approach of spring, let the children plant seeds in a window-box, or sprout them on muslin or lace over water, and watch the germination. Let them plant ten seeds at once in separate places and dig one up at the end of each day. These seeds will show the different stages of germination very strikingly, and can be preserved in alcohol for future observation. Let them bring in twigs bearing leaf-buds and put them in water in a sunny window. The gradual opening of the buds from day to day will prove most interesting. After the leaves come, set the children to collecting. Lead them to see differences in form, size, color, edges, veining, texture of surfaces. Teach them the names of the parts of the leaf. Encourage each child to make a collection of leaves, press and mount them. Teach the parts of the flower, calyx, stamen, and pistils, and the uses of each. Let the pupils draw the leaves and flowers and paint them. This is a very pretty Friday afternoon exercise, and only needs oversight and a little instruction as to mixing of colors from the teacher.

Last spring a school of children, ranging from seven to ten, undertook the following work. They had two special lessons a week, of fifteen minutes each, and collected and observed busily in the intervals.

Definitions of,—

1. Animal, vegetable, plant, and mineral.
2. Parts of a plant: root, trunk, branches, leaves, blossoms, fruit.
3. Parts of a leaf: blade, petiole, stipules.
4. Differences in leaves: form, size, color, edges, veining, texture.
5. Parts of a flower: calyx, stamens, pistil, and uses of each.
6. The work of pollen and how it is given to flowers having no stamens.

The older children copied the points in blank-books and memorized; a great many descriptions were written. The magnifying glass was in constant use, and after school hours was always on the desk with some flower or part of a flower for observation. The parts of the flower magnified were drawn, some children being very fond of

observing differences in stamens and anthers, others pistils, etc.

The same children are studying a little of mineralogy this fall, and are making private collections as well as adding to the school cabinet. They are learning to tell the common minerals and rocks and their marks, and having more fun that can be told "grubbing in the dirt," as the mothers express it. Several field days during the season add much to the interest. In the meantime the legitimate work of the school absorbs about four hours and fifty minutes of each day's session.

Perhaps the benefit of all this "dwelling with Nature" has been given to the teacher even more than the children. It has certainly made the schoolroom the most fascinating place in the world, and the work of education full of the noblest delights.

SAYINGS OF THE LITTLE ONES.

BY E. H.

THE first going to school is a very important event in a child's life, and while he is "taking in" all the newness about him, the teacher sees and hears many laughable things. Some of the experiences of one teacher are given below.

One little one, when asked her age, said, "*Three months*"; while another insisted she was "*Seven going on February*."

Two little girls had quarreled on the playground because one called the other "*Welsh*." The teacher, after reproving them, said, "Why, it's no disgrace to be Welsh! *I'm Welsh, and Dutch, and Scotch*," when a gentle little girl sitting near, said softly, "*I'm a Methodist*."

A little English girl, having been taught that all names of the Deity should begin with a capital, and discovering in the reading lesson the sentence, "He is King of kings and Lord of lords," come up with her finger on the word "lords," and said, in such a surprised way, "*Why, teacher! this Lord has a little hell to it*."

The rhetorical on Friday afternoon are productive of some very funny scenes. The introductory bow is often forgotten, but one little lad seemed to have it on his conscience, for he began, "For every evil under the sun,—Oh, my goodness! I forgot my bow!"

Another, gravely, and with the utmost confidence that he had his "piece" well learned, recited,—

"Mary had a little lamb.
Its face was whiter than snow;
And everywhere Mary would go
The lamb would always follow."

Even the little people knew there was something amiss in that favorite recitation.

The misunderstanding of words causes some very funny mistakes.

One urchin, on coming from school, said, "Our teacher says it's *physician* when we clasp our hands and put them

on the desk," and "I'm to have a *coffee-book* and lead pencil to-morrow."

Another, having heard the boys who handed the wraps to their owners called "monitors," said, "I'm going to ask to be a *thermometer* next week!"

A little girl said, "I want to bring my little sister to visit our school some day. I know it will *joy* her."

Mary told about her auntie hunting berries and stumbling upon a nest of "*battlesnakes*," when Harry, unable to keep the scorn out of his voice, exclaimed, "O, Miss Jennie! she means *rattlesnakes*, and they just throw their legs around you and *squeeze you to death*." No doubt Harry had seen pictures of the boa-constrictor crushing its prey, hence his eager explanation.

Mistakes in number-work are not so laughable, though 110 has been rendered "*eleventy*," and one little girl made some examples which will remain unanswered to the end of time: "If a boy had 3 cents and his mother gave him some more, how many had he then?" "If a man had 16 boys and part of them ran away, how many were left?" If puzzling questions show any merit, she will certainly publish an arithmetic some day.

HOW I JUMPED INTO FAVOR.

BY WINTHROP.

THE teacher who was my predecessor had found lodgment in a snowbank with the kindly assistance of the older boys in the school. Albeit he was the minister's son, and should have been respected because of his father, there was little account taken of this fact, and he was as unpopular as the "best hated man" in any community. It was questionless a hard school, its reputation was to that effect, and no efforts were spared by the attendants of the school to diminish this standing.

The committee was not powerless, but was inactive, and whenever a teacher was ignominiously "fired" by the scholars, they received applications and examined candidates with passive indifference to any past events.

I was engaged to teach this school. I knew positively nothing of its antecedent reputation, character, or temper. I only knew the committee secured me to teach the scholars, and promised me fifteen dollars a week,—the highest price ever paid any teacher before in that district.

It is not necessary that I enter minutely into the beginnings of my work. Suffice it that the first morning found us all busy, the children studying me as they had leisure. Recess came and I turned them all loose into the school yard. This was an innovation, for the custom had always been to give the girls the first outing alone, then the boys. When they all went into the yard I followed them, and watched them at their play. The younger ones soon began a game of "tag," and were having all the fun of "cross and touch" their systems demanded. The larger boys and girls stood about in groups

and conversed, eyeing me the while. I walked about the yard, speaking to a group here and there, and finally came to three or four lads who were jumping,—making a standing jump. I watched all of them take the leap, and commended one springy fellow that out-leaped them all. He had made a good jump, and had cleared over five feet. After all had tried and he was the victor, I toed the mark, asking if they had any objections to my making a record. The answer was encouraging, and I gave my leap, landing, of course, several inches ahead of the best jumper. This mark was made large and then all tried to equal it, but vainly. Then some of the largest boys strolled to our place in the yard, and on invitation they all tried their best to equal or surpass my jump. Several did make longer jumps and were correspondingly proud of their ability. I was invited to try again, and easily went in advance of the best jump that had been made. Again they went in to beat the teacher and again two or three did so, and by this time this sport in the yard was the focus of all attention.

I then said, "Recess time is now over, we will adjourn this contest until to-morrow at this time," and we all went back to the schoolroom to our tasks, which were in no way irksome to me, nor apparently to the scholars. The afternoon passed pleasantly enough, and so did the next forenoon, but all were eager, I could see, for recess to come. When it did come we all with one accord repaired to the jumping ground, and I was asked to "lead off," which I did with a jump that was well in advance of any made on the previous day. During the fifteen minutes we were in the yard no one had succeeded in even "toeing" my mark, much less "heeling" it, and recess closed leaving me victor.

I noticed at noontime that several boys were practicing jumping and were endeavoring to copy the exact motion I made when making the leap. I, in fine, led in jumping, and when that grew somewhat tiresome, I introduced the high standing jump, running jump, etc.

Now, during our common play at recess, I never was addressed other than in a respectful manner, I never heard a swear word, an obscene word, an angry word, an unpleasant word. No one presumed on the community of feeling engendered by the recess familiarity to be "chummy" with me either in the school or out. In a word, by making one with the children I destroyed the awfulness of the dignity of my position as master in the school, won the affection of all by easy good-fellowship, and taught by example that I had surrendered none of my love for manly sport, none of my manhood by becoming a teacher.

It is needless to add that I was not immersed in a soft snowbank, that I was not locked out, smoked out, or put out. None of the rude tricks commonly practiced on country school teachers, were played on me, and the term was as successful and peaceful as any well wisher of the district desired.

METHODS FOR THE SCHOOLROOM.

SOME SIMPLE EXERCISES IN FORM, WITH SUPPLEMENTARY DRAWING.*

BY M. E. COTTING, WALTHAM, MASS.

(SECOND PAPER.)

V. MATERIAL: Rough brown paper and lead pencils. Ask how many children remember of what a picture was drawn at the previous lesson; then proceed to develop the idea of making the picture in the middle of the paper. To make the exercise interesting use some bright, lively means of finding the middle of the desk, table, books, and lastly drawing papers. The proper point being found, direct the picture of the previous lesson "to be remembered," that is reproduced from memory. Now occurs the opportunity to go about to help individual children and give encouragement to dull ones. Whatever is done, even though very crude, must be pleasantly accepted as being the best the child can at present accomplish.

VI. Material: Same as in V. Set out the collection of round objects brought by the class, and lead some one to select the object he most likes; this becomes the model for the day, the teacher drawing its picture, which is imitated by the children. Nicest work should be taken home.

VII. Material: Paper and lead pencils. Draw pictures of objects furnished by the class; continue this sort of work until the children are familiar with the sphere. This repeated picture-drawing of spherical objects affords an opportunity to attend to teaching children the manner of holding the pencil, since less time is devoted by the teacher in actual picture-drawing of the models. The children are now able to do more for themselves as regards the pictorial part of the exercise, consequently the teacher may devote nearly all her time to forming fingers about the pencil and also leading to an easy handling of the same; that is, "do not pinch the pencil."

VIII. Material: Large clay sphere; large wire; slates and pencils. Fit about the surface of the sphere the wire, and present the whole to the class. Lead to the discovery that, if the sphere be removed, the part remaining will be round, or a ring, which represents the "outside," or *outline* of the sphere. This outline the teacher reproduces on the blackboard. Find about the room ring-forms, "sphere outlines," before directing the children to reproduce the blackboard work upon the slates. A strong emphasis must be placed upon the idea of *outline*, as this is really the basis of future picture-making. Continue, in following lessons, to draw outlines of spherical objects until the pupils understand the terms ring, outlines, circle. By this time some skill in use of the hand being gained, slates, or paints, and rough-surface white paper may be

introduced. By using paints, color-lessons may be carried on in connection with form and drawing exercises. The writer's scheme in using paints is, first, to have the object-model thoroughly examined, its outline painted in, or as near as possible, the middle of the paper, and afterward filled in. With a large class it would be necessary to give the lessons to half the class at a time; it is also a very nice plan to work at the number-table, for then fewer paint-plates will be necessary, one being used by two pupils.

IX. Material: Wire rings, or pieces of common white string, or colored coarse silk about six inches in length. The string, being noiseless, is preferable; then, too, the irrepressible member of the class may be enlisted into the service of cutting the desired lengths.

Give to each pupil one bit of string; direct a circle to be formed with it; ask what can be made with a circle, and of course the idea of a change of position will be the only development. Now continue: "If you were given another circle, what could be made with two?" Any child who attempts to combine the circles is allowed to draw a picture of his combination (*design*) upon the blackboard. Afterward the entire class copy the designs from the board. Of course the drawing will be very crude, but that matters little if the arrangement of the string design is accurately reproduced in the line-work upon the blackboard.

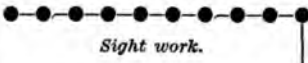
Note. Gradually increase the number of circles; inspire all with enthusiasm sufficient to create the wish to try to produce a design. When a little power is gained allow the designs to be copied upon paper and taken home. Pleasing results,—obtained with colored silks,—may be reproduced with colored pencils, chalks, or paints. Through these very simple exercises an idea of combination-arrangement occurs, and the power of designing is beginning to be developed.

NUMBERS ABOVE TEN.

BY ANNA B. BADLAM.

THE different groups are to be represented by the balls upon the ball-frame. The children learn to recognize *ten* balls as the largest number on each wire. For convenience, cover with a cloth the balls not in use upon the second wire.

Lesson I. — The Number Eleven.

a. First wire : 

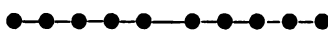
Second wire : 

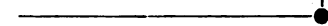
Oral Expression : Ten and one are eleven ; one and ten are eleven.

One from eleven will leave ten ; ten from eleven will leave one.

Written Expression:

$$\begin{array}{r} 1 \quad 10 \quad 11 \quad 11 \\ + 10 + 1 - 1 - 10 \\ \hline 11 \quad 11 \quad 10 \quad 1 \end{array}$$

b. First wire: 
Sight work.

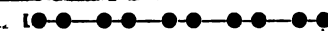
Second wire: 

Oral Expression: Two 5's and one are eleven; one and two 5's are eleven.

One from eleven will leave two 5's; two 5's from eleven will leave one.

Written Expression:

$$\begin{array}{r} 5 \quad 5 \quad 5 \quad 5 \\ \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \\ \hline 10 + 1 = 11; 1 + 10 = 11; 11 - 1 = 10; 11 - 10 = 1 \end{array}$$

c. First wire: 
Sight work.

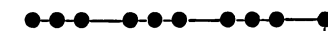
Second wire: 

Oral Expression: Five 2's and 1 are eleven; one and five 2's are eleven.

One from eleven will leave five 2's; five 2's from eleven will leave one.

Written Expression:

$$\begin{array}{r} 2 \quad 2 \quad 2 \quad 2 \\ \times 5 \quad \times 5 \quad \times 5 \quad \times 5 \\ \hline 10 + 1 = 11; 1 + 10 = 11; 11 - 1 = 10; 11 - 10 = 1 \end{array}$$

d. First wire: 
Sight work.

Second wire: 

1st Oral Expression: Nine and two are eleven; two and nine are eleven.

Two from eleven will leave nine; nine from eleven will leave two.

1st Written Expression:


$$\begin{array}{r} 2 \quad 9 \quad 11 \quad 11 \\ + 9 + 2 - 2 - 9 \\ \hline 11 \quad 11 \quad 9 \quad 2 \end{array}$$

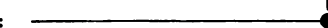
2d Oral Expression: Three 3's and two are eleven; two and three 3's are eleven.

Two from eleven will leave three 3's; three 3's from eleven will leave two.

2d Written Expression:

$$\begin{array}{r} 3 \quad 3 \quad 3 \quad 3 \\ \times 3 \quad \times 3 \quad \times 3 \quad \times 3 \\ \hline 9 + 2 = 11; 2 + 9 = 11; 11 - 2 = 9; 11 - 9 = 2 \end{array}$$

e. First wire: 
Sight work.

Second wire: 

1st Oral Expression: Eight and three are eleven; three and eight are eleven.

Three from eleven will leave eight; eight from eleven will leave three.

1st Written Expression:


$$\begin{array}{r} 3 \quad 8 \quad 11 \quad 11 \\ + 8 + 3 - 3 - 8 \\ \hline 11 \quad 11 \quad 8 \quad 3 \end{array}$$

2d Oral Expression: Two 4's and three are eleven; three and two 4's are eleven.

Three from eleven will leave two 4's; two 4's from eleven will leave three.

2d Written Expression:

$$\begin{array}{r} 4 \quad 4 \quad 4 \quad 4 \\ \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \\ \hline 8 + 3 = 11; 3 + 8 = 11; 11 - 3 = 8; 11 - 8 = 3 \end{array}$$

f. First wire: 
Sight work.


Second wire: 


Oral Expression: Four 2's and three are eleven; three and four 2's are eleven.

Three from eleven will leave four 2's; four 2's from eleven will leave three.

Written Expression:

$$\begin{array}{r} 2 \quad 2 \quad 2 \quad 2 \\ \times 4 \quad \times 4 \quad \times 4 \quad \times 4 \\ \hline 8 + 3 = 11; 3 + 8 = 11; 11 - 3 = 8; 11 - 8 = 3 \end{array}$$

g. First wire: 
Sight work.


Second wire: 


Oral Expression: Seven and four are eleven; four and seven are eleven.

Four from eleven will leave seven; seven from eleven will leave four.

Written Expression:

$$\begin{array}{r} 4 \quad 7 \quad 11 \quad 11 \\ + 7 + 4 - 4 - 7 \\ \hline 11 \quad 11 \quad 7 \quad 4 \end{array}$$

h. First wire: 
Sight work.

Second wire: 

1st Oral Expression: Six and five are eleven; five and six are eleven.

Five from eleven will leave six; six from eleven will leave five.

1st Written Expression:

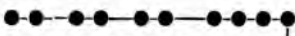
$$\begin{array}{r} 5 \quad 6 \quad 11 \quad 11 \\ + 6 + 5 - 5 - 6 \\ \hline 11 \quad 11 \quad 6 \quad 5 \end{array}$$

2d Oral Expression: Two 3's and five are eleven; five and two 3's are eleven.

Five from 11 will leave two 3's; two 3's from eleven will leave five.

2d Written Expression:

$$\begin{array}{r} 3 \quad 3 \quad 3 \quad 3 \\ \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \\ \hline 6 + 5 = 11; 5 + 6 = 11; 11 - 5 = 6; 11 - 6 = 5 \end{array}$$

i. First wire : 
Sight work.

Second wire : 

Oral Expression : Three 2's and five are eleven ; five and three 2's are eleven.

Five from eleven will leave three 2's ; three 2's from eleven will leave five.

Written Expression :

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} + 5 = 11 ; \begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} + 5 = 11 ; \begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} - 5 = 6 ; \begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} - 5 = 6$$

N. B.—Let the oral work be well understood, and be careful that the children can recite fluently from the various groupings before any attempt is made to have the written work expressed.

THE CHILD AS A LISTENER.

HE may get something, or he may get nothing at all from the music to which he listens. Intricate music sounds prettily to his ear, but he carries nothing of it

away with him ; he cannot listen intelligently unless the tones heard are in such relation that he can follow them. Hence music, to be "educational," must lie within a certain simplicity of construction ; it must be of a nature to be apprehensible.

IN all exercises with objects, or in object talks, it is well to keep in mind these questions, which will lead to exactly the sort of development desired : What can you see ; where is it ; who put it there ; where did it come from ; where grow, or how made ; how does it look,—shape, size, color ; what is on the outside ; properties of this outside ; what is in the inside ; properties of the inside ; what is the whole used for.

To help fix the tones of the key-note and its third and fifth in the child's mind, *Do* is sometimes represented as the firm father ; *Me* as the calm mother ; and *Soh* as the bright son. The teacher was explaining the change from the key of *C* to *G*, and was asking what took place. One little fellow, eager to reply, calls out, "I know ; *Soh*, the son, has got married, and now he is the father."

THE REVOLUTIONARY WAR. — (IV.) The Three Campaigns.

III.—THE SOUTHERN CAMPAIGN.

Principal Events.	Pupils' Side Lights.	Teacher's Side Lights.
1. Lincoln's Campaign, 1779. Savannah and Charleston.	British plans. Bombardment by D'Estaing. Sergeant Jasper. Count Pulaski mortally wounded. Where buried. Col. Tarleton and Buford's Men. Andrew Jackson.	<i>Boys of '76</i> , page 289. <i>Bancroft's</i> , vol. VI., page 263. <i>Dick's Recitations</i> , No. 10, p. 75.
2. Gates' Campaign. Camden, 1780.	Both generals formed a night attack. De Kalb. Col. Smith. Marion. <i>A Terrible Defeat</i> . Gates 80 miles in the rear. Gen. Lee's remark to Gates. King's Mountain and Ferguson.	<i>Camp-Fires of the Rev.</i> , p. 341. <i>Magazine of Am. Hist.</i> , vol. V. Carrington's <i>Battles of American Revolution</i> , page 513. <i>Boys of '76</i> , page 299. <i>Simms's Partisan</i> . <i>Horseshoe Robinson</i> , pp. 13, 129. Mrs. Richardson's <i>Our Country</i> , page 260. <i>Greene's Greene</i> .
3. Greene's Campaign, 1781.		
a. Cowpens.	Meaning of the word "Cowpens." Undisciplined militia with Morgan vs. well-trained soldiers and Tarleton. Col. Washington. Greene's Retreat. Mrs. Steele and her bags of money. Mrs. Motte burning her own house.	<i>Boys of '76</i> , page 343 and 345. Richardson's <i>Our Country</i> . "Kentucky Belle," in <i>Dick's Recitations</i> , No. 2. <i>Scrap Book Rec.</i> , No. 5, page 46. <i>100 Selections</i> , No. 17, page 158.
b. Guilford Court House.	Victory to whom? Retreat. The tower and the fort. Fox's remark in the House of Commons.	<i>Boys of '76</i> , page 353. <i>Camp-Fires of the Rev.</i> , page 356. <i>Bancroft's</i> , vol. VI., page 389. <i>Magazine of Am. Hist.</i> , vol. VII.
c. Eutaw Springs.	Col. Perkins. Gen. Greene's double lines. Manning and the British Officers. Indecisive, but the British retreat. <i>A final victory from many single defeats.</i>	<i>Boys of '76</i> , p. 364. <i>Greene's Greene</i> . <i>Simms's Scout</i> .

THINGS TO TEACH.

OUTLINE OF WORK IN LANGUAGE FOR WINTER MONTHS.

BY CHARLOTTE M. KING, DES MOINES, IOWA.

Appearance of Woods.—Coloring and fall of leaves.

Disappearance of insects and

Winter.—Season of rest.

[birds.

Protection of animal and plant life from cold.

Condition of plant life.—Annuals. Biennials. Perennials.

Changes in Animals.—Color, flesh, plumage, furs.

Animals that perish: flies and butterflies.

Hibernation.—Insects: ants, wasps, hornets.

Worms and spiders.

Reptiles: toad, frog, snake, and alligator.

Bank swallow.

Field-mice, bats, bruin.

Animals that store up food.—Bees (habits and condition in winter), squirrels.

Migration, including mode of travel, winter resort, habits in the South.—

Northern birds: goose, duck, crane, etc.

Singing birds: robin, bluebirds, wren.

Humming birds and others. Stork.

Home-staying birds: crow, jay, owl.

Visiting birds: snowy owl, snow-bunting.

Man: change in food and clothing.

SUGGESTIVE QUESTIONS IN STUDY OF OUTLINE.

1. What animals change color in winter?
2. What other changes in animals at the coming of winter?
3. What birds visit us from the North in winter?
4. What are the uses of snow?
5. When do trappers hunt fur-bearing animals?
6. Etymology of annual, biennial, and perennial?
7. Where is the sap of trees in winter?
8. Why do leaves turn bright in the fall?
9. How does the bear take his longest nap?
10. What are trees called that drop their leaves?
11. Do evergreens shed their leaves?
12. What deciduous tree keeps its leaves till spring? What starts them off then?
13. Why do people plough in the fall?
14. Etymology of hibernate and migrate.
15. What is a cocoon?
16. What are larvæ?
17. What is a chrysalis?
18. What insects store up food?
19. What rodent stores up food?
20. What insects hibernate in winter?
21. Where is the toad in winter?
22. What other reptiles hibernate?
23. What song-bird visits the Bahamas?
24. What bird changes song in winter?
25. From what countries and to what countries do storks migrate?
26. How do they migrate?
27. Do birds build in the South?

28. What birds migrate in flocks?

29. What birds fly singly?

30. Where do the wild goose and wild duck resort?

31. To what states do wrens, robins, humming-birds, and orioles resort?

Precede composition by systematic discussion of topics intended for use. Simplify according to needs of pupils. Introduce by memorized selections; such as Bryant's "Death of the Flowers," Whittier's "Lumbermen," "St. Martin's Summer," "To a Waterfowl," etc.

THE STUDY OF WOODS.



MAPLE.—Prepare specimens, as in case of Oak.

Varieties.—The Sugar or Rock Maple is one of the finest varieties, and is much valued for its sap. In the early spring, before the snow leaves, if possible, small holes are bored in the trees, a few feet from the ground, and by means of shallow troughs the sap is collected in buckets and boiled until it becomes maple sugar, from which maple syrup is made. The average yield of sap is from twelve to twenty-four gallons in a season, although exceptionally fine trees have yielded a barrel of sap in twenty-four hours. It has curious bark, striped in large longitudinal lines; the branches are of a beautiful green; the buds and young leaves are of a delicate rose-color, the leaves growing opposite each other. The Curled Hard Maple has sinuous courses of fibers which give a changeable surface of alternate light and shade. Birdseye Maple has various contortions of its fibers into little knots. There is also Red or Swamp Maple, Striped Maple, sometimes called Moosewood, Mountain Maple, and Vine Maple.

Uses.—Its wood is much used in house-furnishing for ornamentation, for furniture making, for lasts, tool handles, and in naval architecture.

Facts.—It is a beautiful shade tree; the first tree to bloom in the spring; it makes fine timber and the best of fuel. The soil affects the style of growth of the Maple more than that of any other tree. Its autumnal tints are most brilliant, frequently golden or a splendid orange, sometimes bright scarlet or crimson. Its leaves are the earliest to color.

Have pupils name as many articles as possible that they know are made from this wood.

ASH.—Prepare specimens, as in case of Oak.

This wood is much valued for timber and fuel, also for shade trees. It ranks high with carpenters, carriage and coach makers, wheelwrights, and furniture makers. It frequently grows one hundred feet in height.

Have pupils name as many articles as possible that they know are made from this wood.

BEECH.—Prepare specimens as in case of Oak. The branch from which sections are taken may be larger than in case of Oak.

Facts about the Beech.—It grows about one hundred

feet in height, usually has a diameter of from one to four feet. It is much more beautiful when standing by itself. Its wood is hard and heavy. It is the best timber for structures that are to remain under water; is much used for carpenters' tools, shoe lasts, and planes. Its foliage is a rich green.

Have the pupils name as many articles as possible that they know are made from this wood.

EVERGREEN.—Prepare specimens as in case of Oak.

Varieties.—The White Pine frequently grows to a height of one hundred and fifty feet. Its leaves are a rich deep green, growing in clusters of five; its cones are long, with thin, soft scales. It is especially valuable for making boards and shingles. The Pitch Pine grows on sandy plains and in rich soil, and is often low and stunted; has thick dark-colored bark; its wood is full of knots and saturated with resin. The Red Pine, sometimes called Norway Pine, is erect and lofty; it has long lightish green leaves, very obtuse cones, reddish, smooth bark, and is compact, strong, and durable. The Scrub Pine is a straggling tree, low, with spreading and drooping branchlets; its leaves are rigid, with a concave groove; it is used for fuel and for timber.

Uses.—Square timber, planks, clapboards, box boards, masts of ships.

Facts.—Pines grow very rapidly; can be easily cultivated; should be transplanted when young; will grow in poor soil.

USES OF WATER.

PLACE this topic at the top of the blackboard and ask each child, without any warning, to write upon his slate or paper all the uses he can think of in fifteen minutes. Then have these lists exchanged among the pupils.

Ask how many find ten uses, for instance. If none do, then try nine, eight, etc., until the highest number is found. If several have ten, then try eleven, twelve, etc., until the highest be found.

Take the longest list and write it upon the board. Then add to it all the other uses that all the rest of the class have. If there be any use given of which there is any question, let it be carefully considered and erased, if it should not be in the list. Leave the list for a day to add any further uses of which they may think or learn.

USES OF WATER IN THE HOME.

For drinking.	For cooking.
For cleansing.	For bathing.
For cooling heated rooms.	For moistening window plants.
For mixing with medicine.	For steam heating.
For curative purposes.	For carrying off sewerage.

USES FOR HEALTH.

To keep city streets clean.
Large bodies of water affect climate.
Ocean tides purify the shores.
Mineral waters.

See also "Uses in the Home."

USES IN AGRICULTURE.

To water plants for their growth.
To make solvent ingredients in the soil.
To cleanse plants of dust.
To carry to the roots the gases of the air.
For irrigation.
For live stock.

USES IN COMMERCE.

As a highway for transportation.
As a steam motor.
As a water motor, for running elevators, printing presses, etc.
To set machinery in motion with water-wheel.
For great variety of manufacturing purposes.

MISCELLANEOUS USES AND ADVANTAGES.

Beautifying the landscape.
Inspires thoughts, poetic and sublime.
For extinguishing fires.
For laboratory uses.
For drowning superfluous kittens and puppies.
For ending nocturnal cat concerts.
[These last two were actual contributions from a bright boy.]

ANECDOTE OF EDWARD EVERETT.

The following anecdote of Mr. Everett has not been printed, that I am aware of, and it seems to me worth preserving:

N. L., Cambridge.

Many years ago the Phi Beta Kappa oration at Harvard was delivered by the Rev. Caleb Stetson, of Medford. This gentleman was then in the transcendental stage of his intellectual progress, and the oration was largely of the same character.

Edward Everett presided at the dinner, and when the regular toast in honor of the orator of the day was given, the president, after alluding in complimentary terms to the eloquent discourse which had just been heard, said, "It reminded me of the thunderbolt which the Roman poet tells us Vulcan forged for Jove,—

"Three parts of twisted hail,
Three parts of watery cloud,
Three parts of blazing fire.
And three — of empty wind."

"But it can be better said in the words of Virgil himself,—

"Tres imbris torti radios, tres nubis aquosae
Addiderant, rutuli tres ignis et alitis austri."

Aeneid, L. VIII., line 429.

READ a story to the pupils, then let half of them tell the one sitting next, the story in an undertone. This takes all the bookishness out of it, and the one to whom it is told is asked to repeat as best he can the story that came to him.

ADDITION OF FRACTIONS OF FRACTIONS.

IN the book entitled *The Theory of the Sciences*, published in London in 1702, there are some curious methods given for performing problems in "arithmetick," one of which is here given:

"Reduce the first numbers, multiplying the first numerators for to produce a numerator, and the denominators of the same for the denominators; then do the like by the latter numbers. Then abbreviate the said fractions, or which of them will be abbreviated, and then add them together. As to add $\frac{3}{4}$ of $\frac{3}{4}$ of $\frac{3}{4}$ with the $\frac{3}{4}$ of the $\frac{1}{2}$ of $\frac{3}{4}$, first multiply the numerators of the first three fractions for the numerator, then multiply the denominator of those three fractions for the denominator, and you shall find

$$\begin{array}{r}
 24 \qquad 25 \\
 \hline
 \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{1}{2} \quad \frac{3}{4} \\
 \hline
 60 \qquad 96 \\
 \\
 \begin{array}{ccc}
 192 & & 125 \\
 & \searrow & \nearrow \\
 & 317 & \\
 & \nearrow & \searrow \\
 & 480 & \\
 & \nwarrow & \swarrow \\
 & \frac{3}{4} & \frac{3}{4}
 \end{array}
 \end{array}$$

them to be $\frac{3}{4}$, which abbreviated is $\frac{3}{4}$. Then do the like by the other three fractions, and you will find them to be $\frac{3}{4}$, which cannot be abbreviated; then add the $\frac{3}{4}$ to $\frac{3}{4}$ and you will find the whole to be $\frac{3}{4}$, which cannot be abbreviated, and therefore the addition is ended, as may appear."

SENTENCES TO BE COMPLETED.

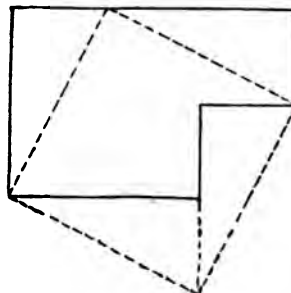
My brother's name is ____.
 I have a sister ____.
 I have a friend named ____.
 Miss ____ is my cousin
 My kitty's name is ____.
 ____ is my dog.
 I know Mr. ____.

A boy may be
 thin or ____,
 short or ____,
 ____ or impolite,
 ____ or unkind.

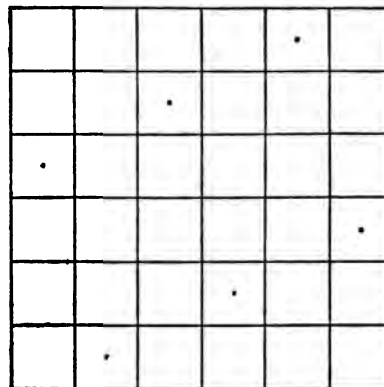
A day may be
 sunny or ____,
 ____ or cool,
 ____ or stormy,
 ____ or foggy.

"TRY THIS."

THE following illustration gives the solution of the problem which appeared under the above heading in the last issue:



THE following is a solution of the puzzle given in the November issue on page 86:



HIDDEN GEOGRAPHICAL NAMES.

(A key to the exercise published in our last issue.)

RAINY, Day, George, Austin, Sandwich, Yellow, Orange, Fear, Lyons, Dare, Danger, Direction, Cross, Cat, Tiger, Defiance, Coldwater, Bath, Wrath, Maine, Grand, Elephant, Bullock, Chase, Apt, Friendly, Pleasant, Nice, Red, Apple, Sugar, Great, Comfort, Goose, Pekin, Funen, Disappointment, Bear, Brown, Aix, Snake, Black, Green, White, Swan, Canary, Yellow, Breast, Gay, Blue, Fox, Beaver, Soda, Lena, Ulster, Clear, Ayre.

POPULAR NAMES OF CITIES.

Aberdeen, the "Granite City."
 Alexandria, the "Delta City."
 Athens, "City of the Violet Crown."
 Baltimore, the "Monumental City."
 Brooklyn, the "City of Churches."
 Baalbec or Heliopolis, "City of the Sun."
 Cairo, "City of Victory."
 Cincinnati, "Queen City."
 Cleveland, the "Forest City."
 Detroit, the "City of the Straits."
 Dayton, the "Gem City."
 Edinburgh, "Northern Athens," the "Maiden Town."
 Hannibal, the "Bluff City."
 Havana, the "Pearl of the Antilles."
 Indianapolis, the "Railroad City."
 Jerusalem, "City of Peace."
 Keokuk, "the Gate City."
 Louisville, the "Falls City."
 Lowell, "City of Spindles."

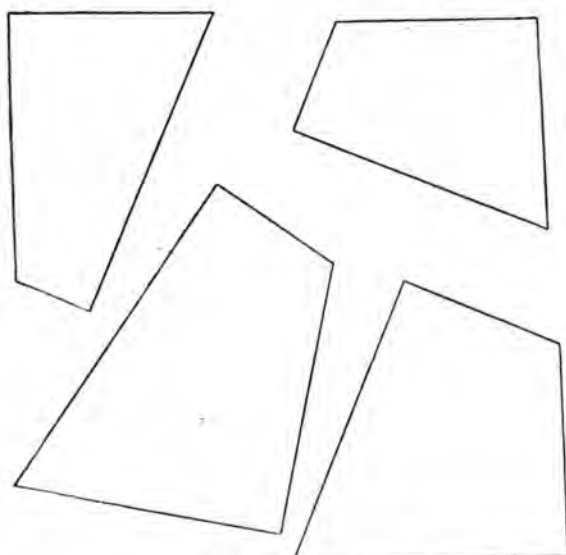
EXERCISES.

ADVANTAGES OF PUZZLES.

BY GEO. W. COLEMAN.

THE puzzle given below is familiar to the teacher, but new to the pupil who has just crossed the borders of puzzlement. It is of that class of puzzles which afford the little folk amusement combined with a wholesome exercise of the mental faculties; and these qualities are so happily blended that the child perceives only the former,—he does not realize that he is studying.

Neither are the advantages derived from solving this puzzle all on the side of the pupil. A teacher who is a keen observer could learn much of the mental habits of her pupils by watching them as they wrestled with this problem. Some, in following the individual bent of their nature, would easily become discouraged and willingly give it up, while the next pupil might take delight in the thought of overcoming a difficulty and apply himself with a determination that would do credit to a Napoleon. Perhaps you will find some quiet little fellow with a tendency to systematize matters, and he will commence by placing a cross (X) in various angles. If you should ask him what he was doing he might reply: "I am picking out all the right angles, and if I find there are only four then I shall know that they form the four corners of the square; of course I can then finish it easily."



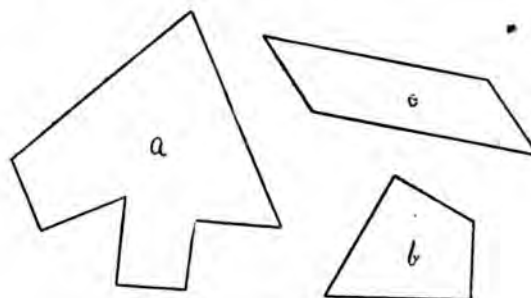
Puzzle No. I.

Some will do it in less than five minutes, perhaps, while others will require half an hour to work it out. The teacher can easily find out who needs a lesson in patience, and so on until she has learned something of practical value concerning the individuality of each one of her pupils.

In such occupation the teacher should make herself one with the pupils, for it is only then that they are sure to exhibit individual traits; and, be it remembered, the dominant characteristic, and consequently the one most worth knowing, is pretty sure to become the most prominent during the exercise.

Aside from all this there is the direct advantage which comes to the pupil from a vigorous exercise of the mind, which is all the more profitable to him because he enjoys it.

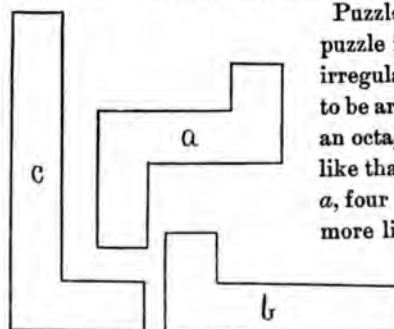
The puzzle is simply this: Cut from cardboard or stiff paper four pieces of exactly the same measurements as those represented above. Then combine them in the form of a square. For schoolroom use it is well to have the pieces cut out of thin wood, like holly, by a jig-saw such as boys usually possess. Have the edges sand-papered, and if elaboration is desired, paint the pieces various colors and varnish when dry.



Puzzle No. III.

After all the scholars have become familiar with this puzzle give them others of a similar character. Scores of them may be devised by a bright teacher. We give but four,—those most commonly used. In our next issue we will give the correct solutions.

Puzzle number two: Cut out eight one-inch squares. Divide four of them into halves by cutting on the diagonal, thus making twelve pieces in all. Then form a square employing every piece. This is, perhaps, the simplest of the four, and in the case of very young children it would be well to give it first.



Puzzle No. IV.

Puzzle number three: This puzzle is made up of twelve irregular pieces, which are to be arranged in the form of an octagon. Cut four pieces like that represented in Fig. a, four like Fig. b, and four more like Fig. c.

Puzzle number four: The five pieces in this are to be arranged in the form of a cross. Cut three pieces like Fig. a, one piece like Fig. b, and one piece like Fig. c.

ENGLISH PENMANSHIP.

WE present our readers a *fac-simile* of a word written in the copy book of a pupil,—Edward J. Green,—14 years of age, in Christ's Hospital, England. The capital letters are an inch and a quarter high above the line. The figures 6, 7, and 9 are more than three fourths of an inch in height. The page is nine inches and a half in length, and but seven lines are written upon the page. The page is seven inches and a half wide, and yet the page is not wide enough for the words "Communion," "Enunciation," "Bereavement," "Lamentation," or "Inconvenient." As the page is not wide enough to take the word, it is written after this manner:

nt
Bereaveme

The theory is that a child must learn to write in this large, bold, round hand, in order to get freedom of movement, and before they leave school they tone down the



size of the letters. Indeed they blend the two hands, the large and the small. In order that there may be a better appreciation of the size of these letters, we give the word "union" in ordinary script:

union

We are indebted to one of the Boston masters who has traveled much abroad and studied the schools of England thoroughly for the loan of the copy-book, which is a sample of the books of the school.

GEOGRAPHICAL CONUNDRUMS.

(Answers next month.)

1. What state is round at both ends and high in the middle?
2. Why is Paris like the letter F?
3. What two cities in France describe a garment too large in every way?
4. What sea would make the best bedroom?
5. Why is Ireland likely to become rich?
6. Why is a man looking through a keyhole like a certain city in China?
7. What two letters name a county in Massachusetts?
8. When is a poor white like a Guinea negro?
9. What cape on the Atlantic coast is used for food?
10. What cape is often used as a caution?
11. What lake pretends to be level land?
12. What town is dangerous for animals with fins?

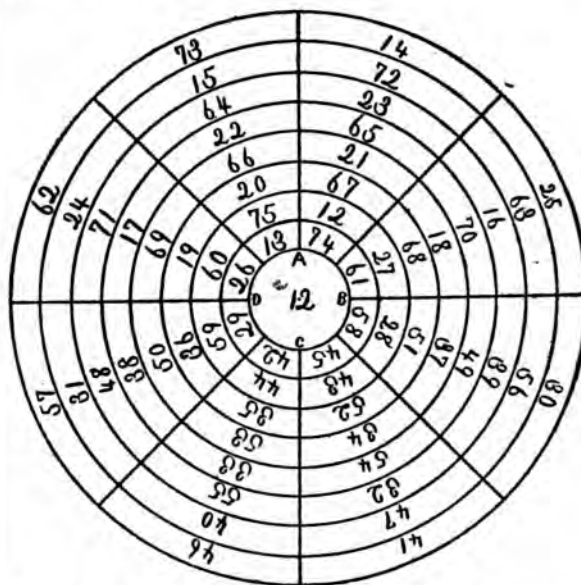
—Schoolroom Games and Exercises.

MAGIC CIRCLE OF CIRCLES.

THIS curious and interesting circle was invented by Dr. Franklin, and has the same properties and is founded on the same principles governing the magic square of squares.

The circle consists of eight concentric rings, each divided by radii into eight equal parts; within the circular spaces thus formed are written the numbers from 12 to 75 inclusive, and in the middle is placed the number 12 also. It possesses the following properties:

1. The sum of all the numbers in any ring together with the center number is 360, the number of degrees in a circumference.



2. The sum of the numbers between two consecutive radii together with the number in the middle is 360.

3. The sum of the numbers in any half ring, taken either above or below the double horizontal line, with half the middle number is 180.

4. If any four adjoining numbers, as if in a square, be taken, their sum, together with half the middle number, is 180.

5. Half the sum of the numbers of opposite radii plus the number in the center is 360.

6. The sum of the numbers in any two half rings above or below the double horizontal line together with the number at the center is 360.

7. The sum of the four numbers forming the extreme ends of any two consecutive numerical radii, together with half the middle numbers is 180. The same holds true if for the four end numbers are substituted any four numbers equally distant from these four ends.

WASHINGTON ALLSTON said; "Man does not live by science; he feels, acts, and judges right in a thousand things, without the consciousness of any rule by which he so feels, acts, and judges."

QUESTION DRAWER.

Which is the best way to our arithmetical Rome?

Mr. Frank Karbaum says, in the JOURNAL OF EDUCATION of August 18, "The last ten years, especially, have brought out most valuable hand-books for teaching arithmetic; but one finds 'many ways lead to Rome,' and that it is yet to be decided which is best."

But let us not make a wrong use of the old saying, "Many ways lead to Rome." In a certain sense, it may be true; but it is not true, that, from any given point, there are many *best* ways to Rome, for there is but *one right* and most direct way from one point to another.

Arithmetic is an exact science, and is really based on immutable laws; and, though almost all the *common ways* are *by-ways* and *round-about ways* to the arithmetical Rome, there is but *one right way* of acquiring the principles of this exact science. Mr. Karbaum says "that it is yet to be decided which is the best." Surely the right way is the best way; but who will show us the right way?

In view of the fact that there is a large army of explorers in our country who are trying to find the best way and are continually showing us new ways in our educational journals and conventions, we have a right to hope for an answer, though it is very evident that the right way has not yet been discovered by them.

The numerous but different methods promulgated now-a-days prove conclusively that the exact science of arithmetic is not clearly understood. When Newton demonstrated the law that "bodies attract each other in proportion to the quantity of matter they contain, the methods of teaching astronomy were changed and *unified*. So it should be with arithmetic. We all know that the grand law of all arithmetical computation is based upon the *nature* and *use* of the *unit*, from which we conclude that the three following principles must govern in all arithmetical calculations and operations:

First: We must understand and continually bear in mind the *name* and *meaning* of every number to be used.

Second: We must also bear in mind the number of units of any name required to make a unit of the next higher name.

Third: When numbers of different names are to be added, subtracted, or compared, they must be brought to the same name and then used as simple common whole numbers.

These laws are founded in nature, and are as incontrovertible as Newton's laws of gravitation, and should, therefore, form the basis of all arithmetical instruction.

Until this is done, our arithmetical teachers, students, and authors, will continue to flounder in the sea of mystical, confused, and arbitrary methods, and fritter away the time and patience of our youth without securing proper thoroughness and efficiency. Z. RICHARDS.

Upon what pedagogical principles can concert teaching be justified?

First: Repetition is valuable in order to make permanent the impressions on the mind. *Second*: It appeals to the sense of hearing, and mental impressions and their associations are thus made more durable and are more easily recalled. *Third*: Concert exercises with young pupils help to keep them all employed and aid in securing a strong collective sympathy in a class, which is not possible by the exclusive employment of individual exercises. In memorizing arithmetical tables, declensions, conjugations, etc., which should be taught so thoroughly that they can be recalled without any effort of reasoning or other mental process, the method of concert repetition has a place that is useful and important. W. E. S.

Should definitions be taught to young children?

Instruction in the meaning of words should be given at quite an early age. Words are representatives of ideas, and as soon as the children acquire a vocabulary of terms they should be taught to apply them properly, not by formal statement or definitions but by constant practice in using them in connection with actual objects or conceptions which they represent. Words make but little impression upon the minds of young children, unless they are intimately associated with objects, actions, and qualities of which they are the signs. Unless the force and meaning of words are taught in actual speech the recitation of formal definitions is of little use. An exercise in synonyms is injurious until the meaning of words has been explained and illustrated and the pupil has acquired the ability to tell in his own language the meaning of the words used. It is a valuable exercise to require that simple sentences be written illustrating the correct meaning and use of words. Instruction should be given at an early stage, also, in the derivation of words and the meaning and use of the common prefixes and suffixes.

W. E. S.

BUZZ.

4. *Is the game of Buzz allowable in school?*

Most certainly. It is the best way we know to fix the multiple of 7, and there is no number so hard to teach so as to stay taught.

Select any pupil to begin with, and have some order of recitation determined upon, and then have them recite, each naming a number promptly. When any pupil's number ends in 7, or is any multiple of 7, he says buzz.

1	2	3	4	5	6	buzz	8	9	10	11	12
13	buzz		15		16	buzz	18	19	20	buzz	
22	23	24	25	26	buzz			buzz	29	30	
31	32	33	34	buzz	36			buzz	etc.		

Any pupil who hesitates to speak his number, or speaks a number when he should say buzz, is to take his place in the floor. After passing 84 it gets interesting, and only the smart pupils will go above 200, but after a little a few pupils will go on almost indefinitely.

THE AMERICAN TEACHER.

A. E. WINSHIP, }
W. E. SHELDON, } *Editors.*

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which **THE AMERICAN TEACHER** is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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MAKE no threats.

THERE is no earthly excuse for slipshod work in the schoolroom.

DON'T be conservative enough to criticise a new thing because it is new.

WHATEVER else the school does, or fails to do, it must inspire a desire for knowledge.

BLACKBOARDS, colored crayons, charts, pointers, pictures, books, and objects should be in constant use in every schoolroom.

WE heard these definitions given for "placid," recently, in one of the upper classes of a grammar school. "Not frisky," "Not gay," "Not wavy."

THERE is a demand for colored wall pictures of good size and design, for language work, which would seem to justify Prang, or some other publisher, in issuing a set which should be at once attractive and varied, with high educational value.

OUR critics will never cease to say, whatever the facts, that the schools give a distaste for manual employment. The truth is that the schools very decidedly tend to help one to make the most of whatever condition of life he

may be in, but they tend, also, to inspire to higher aspirations in life than usually come to the unschooled, and it is to their credit that this is so.

ONE of the most serious charges yet made by a warm friend of public education is that it cultivates a "murderous tenacity about trifles." There is a tendency in this direction wherever and whenever we find a thoroughly poor teacher, there is liability of it with an ordinarily good teacher, and no teacher can afford to feel secure against such tendency. It is high art to know how to be thorough and still emphasize essentials.

EVERY teacher should realize that very much depends upon the state of mind of the pupils, in regard to the results of teaching. If they have an intense love of, and desire for, knowledge, the task is easy to interest and instruct them. To secure attention the teacher must have something new to present. In the anxiety of many to be thorough they overshoot the mark and go over the work again and again, and the pupils, finding that they know it already, cease to attend. They form habits of listening without working; there may even be the semblance of attention and not the reality.

It was the boast of Athens that they were lovers of the beautiful yet simple in their tastes; that they cultivated the mind without loss of manliness. It is true the condition of society was radically different then from what it is now, but that does not change the fact that now as then the love of the beautiful ought to tend to simplicity, and the culture of the mind should tend to manliness, and these two ends should be aimed at by the school, and the aim should be steady and persistent. The public schools must simplify tastes by increasing a love for the beautiful; they must develop manliness through mental activity.

THE LABORER'S CHILDREN.

THE public school must give to the child of the laboring man,—the child who has only so much of school life as the law compels him to have,—knowledge as good and as accurate, though he may have less of it, as if he took the full course. It is not for us to quarrel with the facts, but we must make the most of them. It is for us to be thankful for so much of his time as the school can command. The program must have sufficient flexibility, must cull out for use the essentials, and present them with such elective varieties as to give the boy with twenty weeks' schooling approximately the same advantage in essentials as the boy with forty weeks. It is impossible for him to have the same discipline in acquiring knowledge, the same freedom in its use, the same advantages in details; but he may have, and must have, the essentials in processes and facts. The teacher must see that he has them. They can come from no other source. The sentimental press may write of the necessity, but i

cannot teach one child the essentials he needs. The labor organizations may resolve upon what ought to be done, but they will never devise any plan for the doing of it. The school committees may make regulations, but they must base their legislative action upon the experience of the teachers.

No one now knows just how the graded system is to be modified so as to do this important work for the children who do not take kindly to the school, but it must be done, and the teacher must do it; every step forward is of great moment. Let every teacher study the problem and solve it for himself if he can, and whoever has wisdom should impart thereof to others, until the common stock of wisdom shall enable us to modify the system by uniformity and universality of action.

PATIENCE.

OUR contributors must be patient. Not long since we received an article from a noted literary gentleman acknowledged its receipt and acceptance, after which some months passed before we had occasion to use it. He became impatient, supposed we had forgotten it and should never use it, and sent it to another literary paper with which we exchange; but before they received his MS. they received the article printed in our columns, which circumstance would have placed a writer of less note under suspicion.

We frequently keep matter more than a year before the right time comes to use it, and the reputation which THE TEACHER has attained is largely due to the fact that it has such a quantity of manuscripts on hand that it can make selections from an almost exhaustless store.

A BOSTON PRIMARY SCHOOL IN 1820.

IN the *Annals of the Primary Schools of Boston*, compiled by Joseph M. Wightman from reports dating from the establishment of such schools in 1818 to the time the primary school committee ceased to exist as an organized body of the city government in 1855, there is much that is of interest and importance, not only as matters of history pertaining to the rise and development of the primary free schools, but also as a comparison of the methods of instruction in vogue in the early days of the lower grade schools with these of the present time. In the year 1820 Elisha Ticknor made a report on several primary schools and embodied in his report details of the work done in the various schools not obtainable in any of the other reports. These observations and statements made by Mr. Ticknor are interesting as a contrast to the work now done in the primary schools.

After commending the general appearance of the room, the neatness and self-possession of the teacher, Miss Turner,—Mr. Ticknor goes on to say, "She [the teacher] began by calling upon the fourth or youngest class, which

showed me instantly that she knew how to examine her pupils to advantage, and that she had already divided her school systematically into four classes. The class then stood up in their places and read in words of one syllable, audibly and distinctly, which is not common for those of their standing. They were then ordered to close their books; each did it instantly, and put his book under his arm, and renewed his position, and order of standing. They then spelt in a distinct, and with a proper tone of voice, and sat down. The third class then rose, and passing through similar ceremonies, were seated. . . . The first class then read in the Testament excellently, and spelt, and sat down. At this moment I supposed the mistress had completed the exhibition of her pupils, and was preparing myself to address a few words to them; but observing a child about six years of age at my right hand, "Sir," said the mistress, "will you please to hear the child repeat the rules she has learned?" The child handed me Kelley's *Spelling Book*, and repeated to me between fifty and sixty rules, being all it contained in relation to letters and pronunciation. At her remarkable memory and attention I was surprised, because she appeared at the same time to understand the nature of the rules. "Sir," said the mistress, "no child is allowed to pass from the second to the first class who is unable to repeat these rules." A second repeated to me all the reading part or lessons in Kelley's *Spelling Book*, principally made up of maxims and important sentences, A third, all the stops and marks used in reading; a fourth, the use of all the capitals; a fifth repeated a long catalogue of words of similar sound but differently spelt; a sixth, a long catalogue of vulgarisms, such as *vinegar*, not *winegar*; *vessel*, not *wessel*; *wharf*, not *vaff*, etc.; a seventh, the use of the common abbreviations, such as A.M., D.D., LL.D., etc. No one in the second class can be advanced to the first who has not committed to memory and actually repeated all the above rules. But the examination did not end here; the mistress sent us up a number of misses to show us wristbands they had stitched, and button-holes they had wrought in their leisure moments, after they had learned their lessons. But this was not all; a boy was sent up with a slate, on which he had written with his pencil the common figures, and printed the alphabet very handsomely; a second came with each of the stops and marks on his slate, and repeated to me their names and uses; a third came also and repeated to me the letters standing for numbers, such as V for 5, VI. for 6, etc. This ended the examination. Knitting and sewing were taught; and profanity, I understand, was a stranger among these children."

This report offers some food for reflection and data for comparison. It will be well to bear in mind that in Miss Turner's school there were fifty-eight children, and only eight of these were over seven years of age. The salary of this opulent teacher was the munificent sum of two hundred dollars.

FOR FRIDAY AFTERNOON.

A NEW YEAR'S EXERCISE.

Brief Selections from the Poets.

COMPILED BY W. E. SHELDON, A.M.

NEW YEAR'S EVE.

Concert.— Ring out wild bells, to the wild sky,
The flying cloud, the frosty night;
The year is dying in the night;
Ring out wild bells, and let him die.

Ring out the old, ring in the new,
Ring happy bells across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

(A song to be sung or recited by ONE of the class.)

Stay yet, my friends, a moment stay,—
Stay till the good old year,
So long companion of our way,
Shakes hands, and leaves us here.
Oh stay, oh stay,
One little hour and then away!

The year, whose hopes were high and strong,
Has now no hopes to wake;
Yet one hour more of jest and song
For his familiar sake.
Oh stay, oh stay,
One mirthful hour, and then away!

Days brightly came and calmly went,
While yet he was our guest;
How cheerfully the week was spent!
How sweet the seventh day's rest!
Oh stay, oh stay,
One golden hour, and then away!

Even while we sing, he smiles his last,
And leaves our sphere behind.
The good old year is with the past;
Oh be the new as kind!
Oh stay, oh stay,
One parting strain, and then away!

NEW YEAR'S MORNING.

O glad New Year! O glad New Year!
Dawn brightly on us all,
And bring us hope our hearts to cheer,
Whatever may befall.
On thee, old year, O past old year!
Our lingering looks we cast
Ere thou dost all our actions bear
Into the shadowy past.

For all the joy and happiness
To us this past year given,
For all the love and blessedness,
For all good gifts from Heaven,
For all the care and sadness too,
And hearts by sorrow riven,
As well as for all gladness true,—
Our highest thanks be given.

Then welcome, welcome, glad New Year!
Dawn brightly on us all,
And bring us hope our hearts to cheer,
Whatever may befall;
Bring patience, comfort, gladness, rest,
Bring blessings from above;
Bring happiness,—the highest, best,—
To us and those we love.

RECITATIONS.

- (1) O New Year! New Year! so glad and free,
What will you bring in your arms for me?
Here I stand, waiting to bid you good-speed,
What will you bring me, of all that I need?
- (2) While I stand hailing you, fair New Year,
Change our good wishes to blessings here;
Change them for us into roses, I pray,
Into violets of April, and daisies of May.
- (3) Change them for all into harvests of peace,
Into hope's fruition and joy's increase.
Deal with us tenderly, crown us with cheer,
Bless us! bless only, O gracious New Year!
- (4) Now is the time to begin to do right;
To-day, whether skies be dark or bright;
Make others happy by deeds of love,
Looking up, always, for help from above.
- (5) To the old, long life and treasure,
To the young, all health and pleasure,
To the fair their face
With eternal grace,
And the soul to be lived at pleasure.
- (6) A truce to care,
To gloomy musings on the past;
New days are on your track;
You're twelve months older than you were,
Be wiser, then! time flies so fast,
'Tis useless looking back.

NEW YEAR'S GREETING TO FRIENDS.

In Concert.—A happy New Year! a happy New Year!
Happy, thrice happy to friends far and near.
Though years that are past with joy have been fraught,
Though choicest of blessings they all may have brought,
May their light pale in that of the New Year begun,
As the ray of the stars in the light of the sun!
And when ye have drained the crystal life-spring,
And drank of all joys that earth's New Year's can bring,
Oh, may there begin for each well-beloved friend
A New Year so happy it never shall end!

RECITATIONS.

- (7) The years have linings, just as goblets do;
The old year is the lining of the new—
Filled with the wine of precious memories;
The golden was doth line the silver is.
- (8) I hear you, blithe New Year, ring out your laughter
And promises so sweet;
I see the circling months that follow after,
Arm-linked, with waltzing feet.
- (9) Yes, we will love thee, month of death,
Yes, we will call thee glad New Year.

Freeze with thy kiss my weary breath,
See, I am thine, I know no fear.

- (10) Little by little all tasks are done,
So are the crowns of the faithful won,
So is heaven in our hearts begun.
With work and with weeping, with laughter and play,
Little by little the longest day
And the longest life are passing away—
Passing without return, while so
The new years come and the old years go.

- (11) "Life passes—passes" like a dream—
And yet we, looking back,
See many a golden, sunny gleam
Upon the old year's track;
And looking forward, can we doubt

That there shall yet be gleams
Of sunshine o'er us, and about
Us many radiant beams.

In Concert.—A place in the ranks awaits us,
Each one has some part to play,
The Past and the Future are nothing
In the face of the stern To-day.

Yes, the Year is come,
The fresh New Year, the bright New Year,
That telleth of hope and joy and cheer.
Let us model our spirit to chance and change,
Let us lessen our spirit to hope's range
Through pleasures to come,—through years unknown,
But never forget the time that's flown.

CHRISTMAS BELLS.

CHAS. E. BOYD

1. Be mer-ry now, be mer-ry now, With joy bring in the hol-ly bough; With
2. Whennought we care for frost and snow, And win-try winds un-heed-ed blow, And
3. When, cheered without, re-galed with-in, The blaz-ing fire, the mer-ry din Of

song, and feast, and smil-ing brow, We'll wel-come in old Christmas. But
brisk-ly do our spi-rits flow, While keen the air at Christmas. Let's
hap-py voi-ces, all do win Our hearts from care at Christmas. Oh!

oh, while glad-ness rules the day, Let's think of those "the poor al-way," Whose
not for-get the thin-ly clad, But from our store a trib-ute add, To
how 'twill hal-low then our mirth, To spread the board, to store the hearth, To

wea-ry lot no cheer-ing ray Does gild, not ev'n at Christ-mas.
cheer the heart, too of-ten sad, Oh! none should grieve at Christ-mas.
those poor toil-ing sons of earth, And make them glad at Christ-mas.

OPEN LETTERS TO YOUNG TEACHERS.

BY L. R. KLEMM, PH. D., HAMILTON, OHIO.

IX.—CONTINUITY OF INSTRUCTION.

HAMILTON, O., Nov., 1887.

My Dear Young Friend:—Permit me to quote from your letter: "When addressing our Teachers' Institute on the subject of Principles of Method, you mentioned one which I failed to understand. First, you dwelled upon the necessity of starting with sense-perception, and my own experience furnished me with abundant evidence of its truth. Then you emphasized that symbols should follow, not precede, objects; and your explanation of this principle was as lucid as your illustrations were impressive and convincing. But your third principle, '*Instruction must be continuous*,' remained obscure to me. May I ask you to explain it once more, this time in the columns of THE AMERICAN TEACHER, a journal which offers the benefits of a normal school to us?" Yes, with pleasure.

The easiest way to satisfy you would be to send you to Webster, who defines *continuity* as being an uninterrupted connection, a close union of parts, a cohesion. "Law of continuity (*Math. and Physics*), the principle that nothing passes from one state to another without passing through all the intermediate states." Or, I might interpret by saying that progress in school (and progress here implies that of teaching as well as of learning) should be a step by step movement; that there should be no break in the procedure which might cause disturbance. But that would not be sufficient. There is still a vagueness about these definitions.

Let me say then: By continuity of instruction I mean that the matter of instruction should be given in *genetic order*. I mean that immovable and perpetual order established since the creation of the universe, which in philosophy is called the law of continuity, in virtue of which everything that is done, is done by degrees infinitely small. It seems to be the dictate of good sense that no change is made by means of leaps. *Natura non operatur per saltum* (nature does not operate in leaps); and nothing in nature's own unhurried manner of growth can pass from one extreme to another without passing through all the intermediate degrees.

Now, what is true of nature's growth must hold good of the mind, man existing not outside of but within nature, being part of nature. So then, all the items of each branch of study should be so presented that they form a genetic order. Furthermore, all the different branches of study should have an organic connection with each other, and here comes in the art and skill of the teacher, which no organization, be it ever so wise, no textbook, be it ever so excellent, can replace. There must be a continuous adaptation, in fact, which mere textbook slaves cannot practice, even though they understand it.

Thus, for instance, it would seem wise to choose the examples used in grammar from the material gained in other studies, as geography, history, arithmetic, as well as literature. In other words, we should feed our instruction in language from the material the child has at hand. In spelling we should use new words which the child meets in all branches of study, and not only from a spelling-book, the contents of which are in no organic connection with the child's thought-material. In arithmetic we should use problems taken from the child's home experience, or such as afford an organic connection with the child's range of thought. In short, genetic order in each study, and organic connection between the different studies will cause continuity of thought which is a condition of mental growth, and therefore a condition of success in teaching.

There certainly can be no doubt as to the desirability of connecting logically and organically all the matter of instruction, so that erratic leaping between distant points be avoided. But, my friend, that is but half the principle. So far my explanations had reference to continuity in the *matter* of instruction only. The con-

tinuity of the child's *mind* is of even greater importance. If the child is not prepared to take the next step in an otherwise genetic train of thought, you will not be able to lift him up to it, since he must grow up to it. If he is not prepared to comprehend the next thought, you cannot engraft it upon his mind, since the mind must develop thought within.

A thought, be it indigenous or not, cannot spring into life, or enter the child's mind, as a complete, furnished thing. It necessitates the action of thinking not only of this one thought, but of several others which lead up to it. If I make any one a present of a dollar which I may have earned by hard toil and labor, it requires no toil and labor on his part to take it and enjoy its use. But I cannot give him a thought without making him earn it; that is, not without requiring him to go through the effort of thinking like myself, which will be impossible if the conditions are not the same in both minds.

The "natural" method of teaching derives its name from the fact that it is in harmony with the laws of natural growth, expansion, development. Continuity of instruction refers to the progressing activity of the learner. He is to be led in such a manner that he will not be obliged to make unnatural leaps, but will make steps according to the size of his own legs; that is, his progress will be measured accurately by the capacity of his comprehension. A train of thought which may seem unbroken to an adult is perhaps not so to a child. How often have I heard teachers say, "Can't you see that yet? Haven't I made that clear enough yet?"

You may easily see that buying an article for 10 cents, and intending to make a gain of 20%, you would have to sell it for 12 cts. But a child will necessarily walk slowly before he comes to the same conclusion. There are many links between the first elementary idea of percentage and the child's ability to see as readily as the merchant does what price must be put on the article to make a gain of 20%. It cannot be urged too strongly that the principle of continuity has to be applied both to the matter of instruction and to the mind of the learner. The different degrees of comprehension among the pupils necessitate a constant adaptation of the matter to the mind, and in this the teacher's skill is tested.

I know, my young friend, that this is anything but an amusing letter, but the subject it treats of does not admit humor. A few words on "textbooks" may close this letter. Genetic and logical order is preserved,—nay, highly cultivated in our modern textbooks, but while each offers that order and development within its own range, it rejects, as it were, a connection with other branches of study. I have in mind the many books on grammar that present the subject cut loose from all other, even kindred subjects, such as composition and literature. The same holds good in textbooks of geography, history, arithmetic, etc. Each book illustrates the continuity in the *matter* of instruction, which of course is one of its chief merits,—a *conditio sine qua non*.

But the books, of necessity, leave out of consideration the continuity of the child's *mind*, and therefore must be handled by a teacher who understands the child as well as his subject. The textbook must be again degraded to its proper position, to that of a *means* of instruction. It cannot, and should not, replace the teacher who alone can make the proper selection with reference to the actual state of mind of his pupils. He alone can know what questions to ask, what matter to present, and in what manner, present it.

The value of textbooks has been overrated. It may be unpleasant to hear it, but it must be said: In the same proportion in which the textbooks grew better, the teachers grew worse. I think I can see a complete chain of cause and effect in this. Others say: In the same proportion in which good but poorly paid teachers stepped out of the profession and were replaced by poorly prepared teachers, in the same proportion the textbooks grew better. I accept this as the more charitable explanation, but wish to emphasize again, that the best textbook cannot replace the good teacher, because it disregards, of necessity, the continuity of the mind. It cannot perform the functions of the good teacher who by continuous adaptation fits the matter of instruction to the capacity of the learner's comprehension.

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

308. How can the habit of tattling among young pupils be prevented?

By explaining and illustrating the folly and sin of the practice by example, and by refusing to listen to tales or secrets communicated by one pupil in regard to another. W. E. S.

309. Name some good devices to interest pupils in primary schools.

See AMERICAN TEACHER under "Things to Teach," "Methods," "Exercises," and "Kindergarten," especially exercises in November and December numbers.

313. How is celluloid made?

For a complete answer to this question, see page 104 of *Queer Questions and Ready Replies*, Boston, New England Publishing Co. To explain the process would occupy too much space in this column.

314. When is "Ground Hog Day"?

"Ground Hog" is the name given by the English, at the Cape of Good Hope, to a mammal like a short-legged hog, called by the Dutch *aard vark*, and is the American name for the woodchuck in New England. "Ground Hog Day" is Candlemas Day, celebrated on the 2d of February. For a history of the origin of this term see *Queer Questions and Ready Replies*, page 105, Boston, New England Publishing Co.

315. Where are the presidents of the United States buried?

Washington, at Mt. Vernon, 1799; John Adams, Quincy, Mass., died July 4, 1826; Jefferson, Monticello, Va., died July 4, 1826; Madison, Montpelier, Va., died July 4, 1831; Monroe, first in New York City, then the body was removed to Richmond, Va., 1831; John Quincy Adams, Quincy, Mass., 1848; Jackson, Hermitage, Tenn., 1845; Van Buren, Kinderhook, N. Y., 1862; Harrison, first in Washington, D. C., body removed to North Bend, Ind., 1841; Tyler, Richmond, Va., 1862; Polk, Nashville, Tenn., 1849; Taylor, Washington, D. C., 1850; Fillmore, Buffalo, N. Y., 1874; Pierce, Concord, N. H., 1869; Buchanan, Lancaster, Pa., 1868; Lincoln, Springfield, Ill., 1865; Johnson, Greenville, Tenn., 1865; Grant, New York City, 1884; Garfield, Cleveland, O., 1884; Arthur, Albany, 1886. W. E. S.

325. What president of the United States married the same lady twice?

We find no record of any such transaction. Washington married Mrs. Martha Custis, 1759; John Adams, Abigail Smith, 1764; Jefferson, Mrs. M. Skelton, 1772; Madison, Mrs. D. P. Todd, 1794; Monroe, Miss Kostright, 1785; J. Quincy Adams, Miss Louisa C. Johnston, 1797; Jackson, Mrs. R. Robards, 1791; Van Buren, Miss Hannah Hoes, 1804; Harrison, Miss Anna Symmes, 1805; Tyler, Miss Letitia Christian, 1813; Polk, Miss Sarah Childress, 1822; Taylor, Miss Margaret Smith, —; Fillmore, Miss Abigail Powers, 1826; Pierce, Miss Jane Means, 1834; Buchanan never married; Lincoln, Miss Mary Todd, 1842; Johnson, Miss Eliza McCordle, 1827; Grant, Miss Julia Dent, 1848; Hayes, Miss Lucy Ware Webb, 1852; Garfield, Miss Lucretia Endolph, 1858; Arthur, Miss Ellen Herndon, 1881; Cleveland, Miss Frances Folsom, 1885. W. E. S.

327. Which is most important of presidential administrations? Lincoln's administration is by far the most important.

328. What is the "Eastern Question"?

The Great European Powers are combined to consider all ques-

tions arising in regard to the smaller provinces of Eastern Europe, Turkey, and the countries of Central Asia. All political action bearing upon these sections is regarded as relating to the "Eastern Question."

W. E. S.

329. What three kinds of verbs require double objects, and what kinds of objects are required by each?

Without answering directly the question, "What three kinds of verbs require (or will take) double objects, and what kind of objects are required by each," I will say that any active, transitive verb, that will admit of two regular passives, must have two direct objects, and one of the objects is the name of the thing, and the other the name of the person. Ex. — "Henry told me a story." A story was told me by Henry, or, I was told a story by Henry. "I asked him a question." A question was asked him by me, or, He was asked a question by me. The same principle holds when one of the direct objects is a verbal noun, or an infinitive. Ex. — "I heard the man go." The man was heard to go by me, or, His going was heard by me. In the passive we merely change the simple, or root infinitive, to the infinitive in "ing." B. F. T.

338. Can the image of a murderer be seen in the eye of the dead victim?

No; simply a superstitious notion.

343. Has Louisa May Alcott ever married?

No; see exercise devoted to Miss Alcott in JOURNAL OF EDUCATION for Nov. 10.

344. What river in the United States carries the most water?

The Mississippi.

345. Does the Atlantic Cable rest on the bottom of the ocean? if not, how is it suspended?

It rests substantially on the plateau between Newfoundland and Ireland, of course spanning irregularities of the surface.

347. Can any one explain to me whether "would" in the sentence "And Israel would none of me," is a principal verb, and what the verb is in the original Greek?

Webster regards *would* here as a principal verb transitive, equivalent to *wish*, and cites the passage, Proverbs i. : 30: "They would none of my counsel." Worcester quotes Johnson, who considered it a corruption, and improper. The Septuagint Greek of the two noted passages, Proverbs i. : 30, and Psalm lxxxi. : 11, will be observed with interest by the Greek student. The former passage is: Οὐδὲ ἠθέλον ἐμαὶς προσέχειν Βουλὰς. The latter, Ἰσραὴλ οὐ προσέσχε μοι,—"Israel would none of me." R. L. PERKINS.

Credit to "M. D.," Wisconsin.

QUERIES.

375. Name some book which will aid a teacher in fourth grade to teach pupils habitation and modes of life of animals.

376. Give the names of the Chief Justices of the Supreme Court of the United States in the chronological order of their service.

377. With children which come first in order, — bad thoughts or bad actions?

378. Why do the sun and moon seem larger at their rising and setting than at any other time?

379. Why do the Laplanders and Esquimaux wear the skins of animals with the fur turned inwards while the animals themselves wear their fur outwards?

380. Why does snow fall only in winter time when the upper currents of the atmosphere are below freezing point at all seasons?

381. What international questions were decided by the war of 1812.

382. When did the letters U and V first come into use in the English alphabet?

383. Which is the first song recorded in the Bible?

384. Which is the highest active volcano, and where located?

385. How does the *word method* of teaching children to read differ from the *sentence method*?

386. By what author were the following lines written, and what are the previous lines in the stanza?

"The swan on still St. Mary's lake
Float double, swan and shadow."

THE KINDERGARTEN.

EVERY-DAY LESSONS.—VI.

BY LUCY WHEELOCK.

"WHEN I was at the sea-shore, last summer," said Miss Try to her class, one day, "I often saw a lady who used to go about from one place to another, making pictures of the ships, the rocks, and the pretty trees in the grove. Sometimes she drew the pictures with a pencil, and sometimes she colored them with pretty paints. She kept them all in a book, which she called a sketch-book, so when she went away from the place the pictures would remind her of what she had seen. What do we call people who make us pictures of places, and of children, and of men and women? What is your father, Alec?"

"An artist," was the ready reply.

"If an artist wishes to paint things or places which are miles away from him, what must he do?"

"Go to them," said Paul, briefly, "to see how they look."

"Would you like to play artist, and go far away with me to make some pictures to-day?"

"Yes, yes."

"We will go to the station and take the train and ride far away toward the place where the sun goes to sleep at night, toward the —"

"West."

"Yes, to the West, and we will find a state called Pennsylvania, where there are many coal mines. I think the country will look very black and dingy as we leave the train, and we will go first to see where the people live. We shall find a row of little houses, built upon the mountain side, looking like this. First,



you may draw a square, and on top of it a right angle. Put in an oblong door and two oblong windows. What color would you like to make your house?"

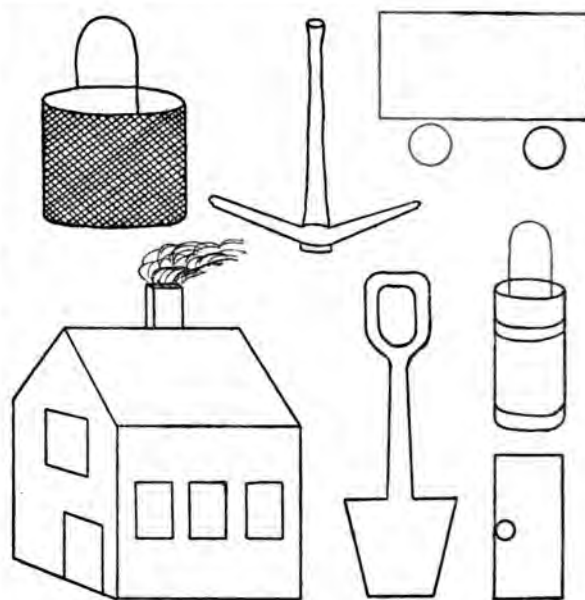
Different colors are chosen, and colored crayons distributed.

"When we go into the mine what shall we see?"

Miners' lamps, baskets, pickaxes, coal-cars, doors into the passage-ways, shovels, and buckets are mentioned.

The children choose the different objects which they wish to draw, working line by line with the teacher at the blackboard. This is the paper which one little boy made.

It should be mentioned that all the children in this class were over five years of age and had the regular kindergarten drawing every week.



There had been previous conversations about the

formation of coal from the vegetation of long ago, and pictures of the tall trees and ferns of the coal-period shown, and the story told of the queer world, when there were no animals. Some of these ferns were pressed in the coal, and

miners sometimes find them. They make very pretty pictures in the coal. Here is one which a miner sent to us, taken from a mine in Ohio.



THE SAND-TABLE.

BY E. L. HAILMANN, LA PORTE, INDIANA.

II.—A Fall Scene.

THIS scene should be on Friday, the result of the week's work and coördinating it. The folding lessons of three days will furnish ducks, pigs, pigeons, cows, chickens, hoes, rakes, pitchforks, etc.

The children make the trees in their brilliant fall dress out of variously-colored tissue paper. The paper is cut in strips about an inch in width. The strips are folded accurately, lengthwise, about twice. One side is fringed leaving the other side plain. This plain side is then rolled around one of the five-inch sticks. The ends are fastened with a little mucilage. The rail fences are made with the interlacing slats or better with little twigs which the children have gathered from day to day. The vegetable fruits, and nuts are made out of clay, and afterward painted. The houses may be folded from the square, made out of clay, or built with clay cubes and bricks which the children have, or built with the building blocks. Wagons may

made out of peas and sticks, or out of clay. The children may gather pebbles with which to lay country roads and to wall up cellars and wells. Jointed dolls or paper dolls, either cut out or folded, add greatly to the charm of the play-work. Hay-stacks may be represented by real hay, or better the children may cut hay-colored tissue paper into fine long shreds, for as all the exercises of the kindergarten should develop the child's native resources it is well to have the children make the things whenever this is practicable.

Skill and a thorough knowledge of the resources of the kindergarten material will rarely fail to suggest means by which even the youngest children will be enabled to contribute their mite of thought and ingenuity.

The kindergartner should have the scene well laid in her own mind before attempting to lead the children. Friction may be avoided by working out portions of the idea on the kindergarten table during the week. Especially is this desirable in building, inasmuch as the table furnishes a firm surface for the blocks. If the form is distinct in the child's mind no experimenting on a shifting foundation will be necessary. The plans must be sufficiently flexible to admit of modifications demanded by the suggestions of the moment. Where practicable it may be well to lay the whole scene, in its chief features, on

the table first, then transfer it to the sand-table, and fill out with details.

By way of illustration I offer the following scene made by my children. A little brook starts at one end of the table, meanders through a valley and finds its way to a larger stream. They unite, flow on together for a distance, are separated by an island, again unite and continue together to a lake at the other end of the table.

On one side of the river, near the lake, is a "rocky" mountain. In the valley, on the other side of the river, is a forest in gorgeous autumn dress. On the same side, and following the river, is a railroad with a train of cars conveying products of the farm to the distant city. A suspension bridge, made of slats and coarse thread and hanging from towers made of clay-cubes, spans the river. Boats, folded from square and equilateral folding papers and varnished, float on the water.

The farm-house is made of clay and painted, with green shutters, red chimneys, and oak-colored doors. Five-inch white sticks and coarse thread serve as telegraph posts and wires. Slats are utilized for plank walks, and the fourth gift furnishes the pigeon-house, garden-seats, stiles, and the steps to the house.

Other details of the scene I leave to the imagination of the reader.

This picture fills the autumn games, "Come Little Leaves," with new interest, illustrates it and gives color to the ideas expressed in them.

ALL who feel tired or languid, and become easily fatigued, and have not energy to apply themselves to study; all who find it difficult to learn their lessons or remember them; all who are *nervous*, especially those who are peevish and sleep badly; in short, all whose brains and nerves require strengthening will be restored to mental and bodily vigor and cheerfulness by CROSBY'S VITALIZED PHOSPHITES. It gives bright new life and health to the brain and nerves in old or young.

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THE CHILD IN 'KINDERGARTEN PHILOSOPHY.'

BY W. N. HAILMANN.

SELF-CONSCIOUS evolution on the part of the child, —by which is meant the being to be educated,—is the aim and the highest outcome of such an education, ideally carried on. Here, again, it may be said that, practically, education rarely seeks this end. The home, the school, and particularly the college, usually have in view much narrower aims. Yet all who can and will look will agree that every educational activity is valuable in the exact ratio in which it lies or moves toward this ultimate outcome,—self-conscious evolution, spontaneous fulfillment of the destiny of man, which, as Froebel has it, is the revelation of his god-like essence.

A new significance is lent to this if we remember that, so far as our knowledge goes, man is the only living being that can lay claim to such a destiny,—that he alone among living things can self-consciously seek its fulfillment. When, in addition, we keep in view the fact that in this self-conscious development man may reach an altitude whence he may see and guide his life as an integral moment in the life of the race, where he may become fully aware of the infinite source and influence of his life, and fearlessly assume its responsibility,—the vastness of the work of education and the great dignity of the mother, on whose love this work rests, fill our hearts with grateful awe.

These considerations furnish the keys for the educational scheme of which Froebel is the exponent. It respects heredity as a phase of inertia in the evolution of man, but does not submit to its drift. Whenever this heredity would lead the child astray, it seeks and finds correctives in the perfectibility of man. Whenever heredity lies in the direction of man's high destiny it strengthens and intensifies the drift. This high and holy faith in man's perfectibility is the rock on which it builds all its work.

The child comes to the mother, the educator, endowed with the untold privileges and responsibilities of humanity, implied in these considerations. It may be, as is the case in the rest of organic life, that all this springs from the principles of the preservation of self and species. Yet the addition of self-consciousness in this work, extended as has been shown into the life of the race, gives to these principles a different meaning. They cease to be the end of existence, and become the means for an aim that lies ever beyond. It makes the being consciously subservient to its drift, the material to the spiritual, time to eternity, the finite to the infinite. It implies an ever-expanding knowledge and mastership of what we call the universe, the external; and, what is more, an ever-deepening knowledge and mastership of what we call self, the internal; for life, the intercourse between the external and internal, will be complete in the ratio in which harmony has been established between the two.

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EXAMINATION FOR KINDERGARTEN TEACHER'S CERTIFICATE, PHILADELPHIA.

THEORY AND PRACTICE.

1. State the principles which distinguish Froebel's philosophy of education from the systems of other educational reformers.
2. Describe the second gift, and explain what is intended to be accomplished by it.
3. What are the specific objects which the kindergarten seeks to attain in the education and training of the child?
4. *Weaving*.—One example showing the first five steps.
5. *Pease Work*.—Make a pentagonal prism.
6. *Paper Cutting and Mounting*.—Invent and make a geometric pattern with colored papers.
7. *Paper Folding*.—Make the first fundamental form five times, and then convert all of these but one into four different forms.

DRAWING.

N. B.—Place each of the following exercises on a separate sheet. The figures are to be bold and to be freely drawn.

1. Make an outline drawing of
 - (a) The cat.
 - (b) The lily.
2. Draw an outline representation of the group of models placed in view.
3. Make a picture to illustrate a story of which the following is a synopsis:
Mary lived in a pretty house in the country. She took her slate and started off for school. She saw a rabbit near the lane as she went along. The rabbit sat up to look at Mary and she stopped to look at the rabbit.

MODELING IN CLAY.

1. How would you prepare dry clay for the children to work with?
2. How would you take care of the clay?
3. Develop the square pyramid, beginning with the sphere.
4. Model a basket containing apples.
5. Make a high relief model of a pear.

GEOMETRIC FORMS.

1. Classify triangles according to their sides and their angles. Illustrate with figures.
2. Classify four-sided figures. Illustrate.
3. Explain the development of the cone.
4. Make a paper form of a cube.
5. Make a paper form of a triangular prism.
6. Make a paper form of a square pyramid.

MUSIC.

1. Why is music made an essential feature of kindergarten instruction?
2. How would you prevent children from straining their voices?
3. How would you secure a pure, sweet tone in singing?
4. Write, on the staff, three measures of music in the key of A, $\frac{3}{4}$ time, using a half note in the first, a dotted note in the second, and a quarter rest in the third.
5. Write, on the staff, the major scale of B flat.
6. Sing, at sight, exercise A.
7. Sing, at sight, exercise B.
8. Sing from memory a kindergarten action song.

PLANT AND ANIMAL LIFE.

1. (a) What peculiarities of structure are used as the basis of the classification of plants?
(b) Illustrate your answer by classifying the pink.
2. (a) Illustrate by drawings the several parts of a flower.
(b) Combine these several parts to represent the entire flower, and name the flower that you have drawn.
3. Write the outlines of a lesson on the *potato* to a class of kindergarten children.
4. (a) Name the four great divisions into which naturalists have divided the animal kingdom.
(b) State the leading characteristics of each.
5. Name three different coverings of animals, and show how these coverings are adapted to the habits of the several animals to which they belong.
6. Give a conversation lesson on the *cat*, stating the distinguishing characteristics of the structure and the habits of the family to which it belongs.

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PHYSICAL PHENOMENA OF NATURE.

1. Write out the topics of a conversation on *snow*, showing the subject-matter and the purpose of the lesson.
2. Arrange the outlines of class-lesson on *rocks*, adapted to advanced kindergarten pupils.
3. How would you develop a lesson on *running waters* so as to explain their origin and their uses?
4. Write the outline of a conversation-lesson on *light*.

SCHOOL HYGIENE.

1. Give the three essentials of any scheme of artificial ventilation.
2. How can the teacher care for the eyes of the pupils?
3. How can the moral nature of the pupils be effectively aroused and strengthened by agencies at the disposal of the teacher?
4. (a) Why do not the feelings of teacher or pupils form a good means of judging of the correct temperature of a room?
(b) What do the best authorities consider the proper temperature?
5. How can the kindergarten teacher influence her pupils in regard to their food?

MENTAL AND MORAL SCIENCE.

1. Discuss the relative values of mental development and mental acquisition.
2. What is meant by training a faculty?
3. Name the special senses in the order of their knowledge-giving power.
State what stimuli are appropriate to each.
4. Upon what two conditions does the power to reproduce an object or event some time after it has been presented, depend?
5. Show how imagination is related to the acquisition of knowledge.
6. Discuss sympathy as an element in education.
(a) Its uses.
(b) How cultivated.
7. Mention some of the ways by which a child's attention is stimulated.

HISTORY OF EDUCATION.

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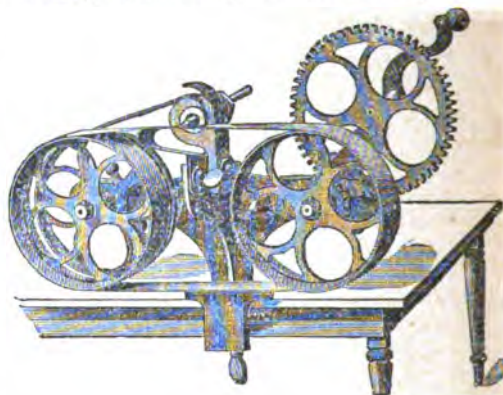
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THE NOVEMBER NUMBER.

From its first issue in 1870, THE CENTURY has never ceased to grow,—to multiply its attractions, and to gather together the best that writers, artists, and engravers could furnish, and lay this, month by month, before a constantly increasing audience. A prominent newspaper has lately said of THE CENTURY that “it is doing more than any other private agency of to-day to teach the American people the true meaning of the words Nation and Democracy. It is a great magazine, and it is doing a great work.” Its average monthly edition is now nearly 250,000, many issues needing fully that number to supply the demand.

THE NOVEMBER NUMBER.

Ready everywhere November 1st, is the first issue of the new volume. One of the great features of THE CENTURY for the past year (and one which has added thousands of readers) has been “Abraham Lincoln: A History,” by his private secretaries, Messrs. Nicolay and Hay, a work upon which they have been engaged nearly twenty years. The events of Mr. Lincoln’s early life, having been narrated,—his political conflicts, etc., the writers now enter upon a more important and personal part of their narrative and begin

“LINCOLN IN THE WAR.”

The November CENTURY contains “The President-elect at Springfield,” with new material of rare interest, including unpublished letters from and to General Scott, W. H. Seward, Horace Greeley, and Thurlow Weed.

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IMPORTANT SUPPLEMENTARY WAR PAPERS.

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These War Papers have probably brought to THE CENTURY more readers than were ever attracted by one feature in the history of magazines. It was for this series that General Grant was first induced to write his reminiscences. A number of supplementary papers, of a general and untechnical character, are to follow the battle series, to include a paper by General Sherman on “The Grand Strategy of the War,” with narratives of personal adventure,—tunneling from Libby Prison,—the torpedo service, the telegraph, etc., etc. The Lincoln History will contain much that is entirely new regarding the conduct of the Civil War.

FICTION BY ECCLESTON AND CABLE.

Two important stories begin in this November number,—“The Graysons, a Story of Illinois,” a novel by Edward Eggleston, author of “The Hoosier Schoolmaster,” etc.; and “Au Large,” a three-part story of Acadian life, by George W. Cable, author of “Old Creole Days,” etc. Both are illustrated. In December will begin

A THREE-PART STORY BY FRANK R. STOCKTON,

Entitled “The Dusantes,” by the author of “Rudder Grange,” “The Hundreth Man,” etc., etc. There will be a great variety of short stories by the best authors, throughout the coming year. Many of them illustrated. “A Little Dinner,” by William Henry Bishop, is in November.

THE ILLUSTRATED FEATURES

Of the November CENTURY include “The Home and Haunts of Washington,” with an interesting frontispiece portrait of Washington, never before engraved; “Augustus St. Gaudens,” a paper descriptive of this distinguished sculptor’s work, beautifully illustrated with engravings, including a full-page picture of St. Gaudens’ new statue of Lincoln for Chicago; “Sugar-Making in Louisiana,” with 17 striking pictures by Kemble, etc.

MISCELLANEOUS FEATURES

Of the year just beginning will include occasional articles bearing upon the subjects treated in the current INTERNATIONAL SUNDAY-SCHOOL LESSONS, illustrated with reproductions of Mr. Edward L. Wilson’s interesting photographs; a series of papers on IRELAND, its Ethnology, Customs, Town Life, Literature, and Arts, by Charles DeKay, illustrated by J. W. Alexander; papers by Theodore Roosevelt, author of “Hunting Trips of a Ranchman,” portraying the wild industries and sports of the Far West, illustrated by Frederick Remington; further important papers dealing with the COLONIAL PERIOD, by Dr. Eggleston; Mrs. van Rensselaer’s papers on ENGLISH CATHEDRALS, with Mr. Pennell’s remarkable illustrations; Dr. Buckley’s timely series on DREAMS, PRESENTIMENTS, SPIRITUALISM, etc., together with essays on Religious, Educational, Artistic, and other subjects of the day. THE CENTURY for the coming year will devote more space than usual to MUSICAL SUBJECTS.

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CHRISTMAS CAROL.

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RING the bells across the dawning!
Ring the bells for Christ has come!
Come to each of us, his children,
Ring the bells, for Christ has come!

See the holy baby Jesus,
Golden glories round him shed!
Softly thronging down the midnight,
Angels hover o'er his bed.

In the East a star is blazing!
Wise men, holy, gather near!
Shepherds leave their flocks by night-time;
Ring the bells, for Christ is here!

Ring the bells, oh softly, sweetly;
See his mother's tender face!
He is ours, the little Christ child!
He is hers by God's own grace!

Ring the bells! oh set them telling
All the weary world 'tis true!
Ring them loud, for God he loves us;
Christmas day is born anew!

Ring them for the little children!
Tell them all the story sweet,
Of the starlight and the shepherds,
And the king they go to meet!

Ring the bells for God, our Father!
Ring them for the baby king!
Ring them for the glad world listening,
Ring the happy bells. Oh ring!

COASTING.

BY Y—L.

WILLIE.—You should have seen us coasting;
We had a jolly time;
The air was clear as crystal,
The icy hill was prime.

And there were Rob and Harry
And Howard and John and Ned;
And Mary came with Bessie
And cunning little Fred.

You see we had the "Firefly."
'Tis very swift and strong;
'Twill hold a dozen fellows;
The hill is steep and long.

Jack Murphy did the steering;
We seemed as tho' on wings,

And when we climb the slippery steep
The air with laughter rings.

The hill did really seem alive
With happy girls and boys,
Who made the crisp air fairly ring
With merriment and noise.

But, Bertie was not with us.
Say, Bert, where did you go?
I'm sorry any boy must miss
The day's fun in the snow.

Bertie.—I sat at home in comfort;
I didn't care to freeze;
I'll take the fire a day like that
And stay there, if you please.

For my part I can't see it,—
Just where the fun you find;
The going down is good enough,
And that I do not mind!

But then I hate to climb the hill
And drag the heavy sled;
I never could see fun in that,
Whatever others said.

Then shiver, shiver, shiver,
Out in the biting wind;
Oh no, I'd rather be indoors;
There comfort real I find.

Willie.—Oh, but we do not shiver;
We run and jump about;
And then it makes us warmer
Sometimes, I think, to shout.

And if our hands when coasting
Are cold as cold can be,
We swing them all about us,
From side to side, you see.

And if our feet are chilly
We stamp with all our might
I wouldn't miss a coast for that,
Not by a wondrous sight.

Nor do we mind the climbing
When down the hill we go,
For coming up we walk so fast
Our cheeks are all aglow.

We have the finest coasting
The coldest winter days;
Indeed, Bert, if you only know,
Such working really pays.

For pleasure gained by labor
Is just the best of fun.

Oh, I am glad the winter
Has really now begun.

But, Bert, don't stand and shiver;
Come out and jump and play;
You'll feel the better for it,
And happier all the day.

And bring your little brothers,
And Sister Lillie, too;
I'm sure they would enjoy it
As much, perhaps, as you.

It makes one feel so happy,
When with the girls and boys,
To see them bright and merry
And hear the fun and noise.

For more than half the pleasure
In anything we do,
Is having others with us;
Seeing them happy, too.

THE MAGIC SQUARE.

BY WINTHROP.

THE magic square has interested and diverted mathematicians for centuries, and the interest in it is not lessened by the contributions made to its literature. For a long time it was thought to be a haphazard arrangement of figures, but it has been shown that there is a "method in it"; and, while the making of the square is always interesting, the plan of it is clear and simple.

Squares of figures, which, counted upward, across, or from corner to corner, will always give the same result, are called Magic Squares. The simplest form of the square is formed by arranging the first 9 numbers where the sum of any row of three figures, whether horizontal, vertical, or diagonal, is equal to 15.

The next is a square formed from the first 16 numbers, and this can be formed by several different arrangements of the figures.

16	4	1	13
5	7	10	12
11	9	8	6
2	14	15	3

OR

10	15	6	3
8	1	12	13
11	14	7	2
5	4	9	16

In these squares the sum is always 34, and, as these figures may be arranged in several ways differing from the above, it may be worth while to attempt some of them.

To form a magic square of an odd number of terms in geometrical progression is an easy task if one knows the

rule. Here is a square of 49 numbers, arranged in 7 rows up and down.

30	39	48	1	10	19	28
38	47	7	9	18	27	29
46	6	8	17	26	35	37
5	14	16	25	34	36	45
13	15	24	33	42	44	4
21	23	32	41	43	3	12
22	31	40	49	2	11	20

In this square the sum is 175.

Directions for constructing the magic square are as follows:

Rule a square and divide it into the required number of cells. Begin by placing the figure 1 in the middle cell in the top row; then put 2 at the bottom of the next row to the right, and then oblique upward to the right with the next figures until the cell in the last perpendicular row is filled, when the next figure is carried to the left-hand cell on the horizontal row next above it; again in diagonal direction upward to the right until the top, or a filled cell, is reached,—if to the top, place the next figure at the foot of the next row to the right, and oblique upward as before to the right; if to a filled cell, put the next figure directly under the last one made, and oblique upward to the right as before until the top is reached, or a filled cell, or the last row on the right,—if the latter, go to the left cell on the horizontal row next above,—and so on to the end, when the highest and last number will be found at the foot of the row containing number 1. When the top cell on the right-hand column is reached, there being no row at the bottom at the right, the next figure is placed under the last one made, and the next to the top of the left-hand column.

With these directions, and a little study of the figure given, any magic square of an odd number of cells may be constructed. Magic squares of 5, 7, 9, etc., may be readily formed, and much amusement and instruction derived therefrom.

A simple rule has been made to find what any sq. should contain: "Multiply the number of places in square by half the number of places, and to the product add the other half: and, to show what each column the square should contain, divide the sum of its sq. by one of its parallel sides;" *e. g.*,

$$3 \times 3 = 9 \quad (9 \times 4\frac{1}{2}) + 4\frac{1}{2} = 45. \quad 45 \div 3 = 15.$$

$$7 \times 7 = 49 \quad (49 \times 24\frac{1}{2}) + 24\frac{1}{2} = 1225. \quad 1225 \div 7 = 175.$$

Poignard, a canon of Brussels, published, in 1701, a curious work, in which he showed how these squares r

be made by combining two squares which are in themselves "magic."

Take a square of 25, for example. Fill the upper row with the figures 1, 2, 3, 4, 5, arranged in any order; e. g., 1, 5, 3, 4, 2. Then fill the second row of the square

A					B				
1	5	3	4	2	15	0	20	5	10
3	4	2	1	5	5	10	15	0	20
2	1	5	3	4	0	20	5	10	15
5	3	4	2	1	10	15	0	20	5
4	2	1	5	3	20	5	10	15	0

with the same figures, beginning with the third; thus, 3, 4, 2, 1, 5, and repeat this process until the square A is filled. To construct square B, with in like manner the multiples of 5, — 0, 5, 10, 15, 20, — in any order, taking care, however, to begin the second row with the fourth number of the series. Complete the magic square C by adding the numbers in one square to those in corresponding positions in the second; thus, $10 + 2 = 12$; then, $20 + 5 = 25$, etc., etc., the sum being written in corresponding places in square C. This process gives squares totally unlike those made by the rule given above. By this method any number can be made to fall in any desired place.

In the *Mathematical Dictionary* there is given a simple method for forming a magic square, as follows: Set down the numbers in the form of a natural square, as shown in the diagram.

Then draw straight lines, cutting off three numbers at each corner; viz., 1, 2, and 6, at the upper left-hand corner; 4, 5, and 10, at the upper right-hand corner; etc.; these four lines form a square; then draw corner lines parallel to these dividing the square into 25 cells; 13 of these cells will be occupied by numbers. Fill the empty cells as follows: Each number in the corners is to be carried diagonally up or down along the row where it is found, to

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

the most remote vacant cell and then written. The upper right-hand column would then contain these numbers: 3, 16, 9, 22, 15; the middle column, 7, 25, 13, 1, 19, etc.

There is the great Magic Square of Magic Squares, which is a magic square of 256 cells, filled up by the numbers from 1 to 256. The construction of this great square, which has a number of interesting and curious properties, depends upon that of a magic square of 16 cells, having the sum of the four numbers in any square of four cells always the same.

In the *Scientific American*, of the date of 1870, I think, there appeared a curious arrangement. It was a magic square containing a lesser magic square, and this lesser composed of four magic squares, the heavy lines indicating the several distinctions. The sum of the num-

90	14	12	100	84	98	4	96	10	2
16	66	86	87	63	22	80	81	19	85
92	39	61	60	42	75	25	24	78	9
7	59	41	40	62	23	77	76	26	94
88	38	64	65	35	82	20	21	79	13
18	55	50	54	43	27	73	72	30	83
86	45	52	48	57	70	32	33	67	15
3	44	53	49	56	34	68	69	31	98
6	58	47	51	46	71	29	28	74	95
99	87	89	1	17	8	97	5	91	11

bers in the largest square, whether counting upward, across, or diagonally, is 505; omitting the outside numbers, the sum is 404; in each of the four small squares the sum is 202. It is certainly an ingenious arrangement, but no rule for its construction is apparent.

MODERN METHODS IN ARITHMETIC. — (III).*

BY A. E. WINSHIP.

10. Teach the numbers from 10 to 19. Whether story-telling is continued depends upon the teacher's estimate of its need. Objects should be used at any rate, and if the children are skillful in story-telling, and enjoy it, they can do it with little waste of time.

They should keep the same ten objects in one group, and place the addition near it, but they should not be merged as below 10. The aim up to 10 was to have them know the number entire, — to know it in all its parts and combinations.

* Copyright, 1887.

BOSTON PENMANSHIP IN 1790.

WE present below a fac-simile of a page from a writing-book used by Edward Craft in 1790, in one of the grammar schools of Boston. We are indebted to James A. Page, master of the Dwight School, for the loan of the book from which it is taken. Every page of this book bears evidence of the same skill as seen in this fac-simile. It is not a copy-book in any sense, but is made up from a variety of exercises. The first is dedicated to "A Watch"; the following is the sentiment:

The second is on "Rural Felicity":

"How blest the man who, far from noise and strife,
In sweet retirement leads a rural life!
No dupe to fashion and no slave to fear;
Tho' few his friends, he finds these friends sincere,
In innocence his happy moments fly,
Prepared alike, in peace to live or die."

The third is entitled "Success in Business; or, The Arts of Thriving." It runs as follows:

"When Business calls us to unfurl the Sails,
And o'er the Surface send before the Gales;
Presence of Mind, and Courage in Distress,
Are more than Armies to procure Success,

BUSINESS.

*How bright does the Soul grow with Use and
Business? With what proportion'd sweetness
does that Family flourish, where but one Labour-
ous Guide steers an order'd & regular Course.*

When thou hast BUSINESS concern to do,
With Prudence Act, and Resolution too;
Under whole Conduct you will seldom fail,
Wisdom and Courage join'd, must needs prevail.

EDWARD CRUFT, Oct: 30th 1790

"Could but our Tempers move like this Machine,
Nor urged by Passions nor delayed by Spleen,
And true to Nature's regulating Power,
By virtuous Acts distinguish every hour;
Then Health and Joy would follow as they ought,
The Laws of Motion and the Laws of Thought,
Sweet Health to pass the present Moments o'er,
And everlasting Joy when Time shall be no more,"

The Sire of Gods and Men, by his Decrees,
Forbids our Plenty to be bought with Ease."

Following these are extracts, entitled "Freedom," "Advice to a Young Tradesman," "Reputation," "Solitude," "Knowledge," "Painting," and "Reading and Writing." There are thirty-six pages containing exercises similar to these.

PENMANSHIP.—(III). *

BY W. F. LYON, YOUNGSTOWN, OHIO.

GYMNASTICS or calisthenic exercises are useful in connection with the writing lesson. A finger exercise will be found very good. The teacher should stand in front of the school, the right hand straight by the side; then swing the hand directly out from the body, sideways, to an upright position, quickly; bring it back to first position; have children do the same. Repeat this two or three times, until they can follow you. Now ask them to watch your hand; as it goes up, separate the second and third fingers; try this several times; then separate the first and second fingers; then third and fourth. The whole exercise need not occupy more than two minutes; it will amuse the children. Lead them to think of their fingers, and after a few days they will be able to separate the fingers at will. When the fingers obey the will, penholding becomes very simple. The teacher should take the pencil in her hand and hold it where all can see; call their attention to it, show them where it crosses the first finger (which is right where a ring would be worn on that finger); and then point out to them where the second finger is, and where the thumb touches the pencil. This will have to be repeated frequently with some. A drawing of a hand on the blackboard will help greatly. Children will look at a picture, though it may be imperfect.

The third year is the proper time to take pen and ink. The children by this time have learned the form, position at desk, and pen-holding, so that we may now give particular attention to the new implement. The great source of trouble is the ink, but if the desks are supplied with corked ink-wells, much of this difficulty will be avoided. It will be necessary to return once more to first principles, and go over nearly the same ground as that over which we traveled the second year, but we can move more rapidly. We can use more words and much longer words. The work in the first few weeks of this year must be slowly and very carefully done. There must be no scribbling allowed, and the children should be taught that blotting is disgraceful. The slovenly practice of throwing ink from the pen upon the floor should never be allowed. Writing-books, ruled in same manner as those used in the second year, will be found well calculated for this work. The pen should have a rather broad, flexible point. The pen-holder should be light, tapering toward the upper end; those with rubber tips for holding the pen are best, as the fingers will not slip easily upon them.

In the fourth year introduce a book with a printed copy. Let every child be provided with an exercise book. If they do not use this exercise book, they will write a certain number of words at a lesson, and no more, and the writing will become practically like drawing. Use for an exercise book the same book as is used in the third

grade. Open to first copy in copy-book, which is small *i*. Study it, ask questions about it, and answer questions which the children may ask. Place an exercise upon the board which will develop this letter,—a counting exercise for five minutes, in which all work together; make fast enough to hurry up the slow ones, and slow enough to hold the nervous ones in check,—just as the expert horseman handles two strange horses which do not work quite in harmony. When the teacher has them perfectly in hand, she may stop counting, and give each one in the room a little personal attention. Take the pen and show them how. She should not spend too much time giving undue praise to the bright ones, but she should be very particular to assist the dull ones. When all have practiced sufficiently upon the exercises, let them put the letter or word in the copy-book. Write it once or twice in the copy-book; compare with copy. Should there be any mistakes, go back to exercise book and correct them. Then try the copy-book again, and so on, bringing the best work to the copy-book to compare it with the perfect copy. It will be found that, working upon this plan, all will have great freedom so far as speed is concerned, for while all will write a certain amount in a copy-book, some will have done twice as much as others in the exercise book. If these two books are skillfully handled there will be no drawing done in the copy-books, and yet they will be very carefully and very neatly filled. It is impossible to make an exercise book a copy-book, and *vice versa*. It will be observed that the teacher who works in this way will not have much time to sit during the writing lesson. She should have her eyes open that no time be wasted upon useless exercises. Allow the use of no exercise except such as she dictates. Count whenever necessary, and when counting see that every one follows the count closely. Watch position and penholding.

Fifth year: Use No. 2 copy-book, with exercise book in the same manner as previous year. The children are at proper age and sufficiently developed muscularly to take up what is known as the "fore-arm or muscular movement." But little difficulty will be experienced if the previous work has been done as marked out, and if the teacher has perfect control of her school. In beginning this allow a great deal of freedom. Do not expect them to get any very good letters for some time. The small *i* will again come in very nicely; it is very simple and easily made; try it three spaces high, and bring it down to the required height by degrees. Loose, meaningless exercises do not amount to much. Every exercise should have in it some part of a letter that is aimed at. When children once find that they can write with this free, easy motion, they will give the teacher but little trouble. Create enthusiasm in this, and it will never die out. It may be found necessary to omit the copy-book for a week, and perhaps for a month. Do not touch it until all have become thoroughly interested in the movement.

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VOL. XI.

Devoted to the Methods and Principles of Teaching.

No. 5.

THE TEACHER'S TASK.

BY CHARLES MOREAU HARGER.

YE who the teacher's place would fill should know its duties vast,
Should count them o'er as a novice's beads are through her fingers passed,
And earnest prayer on every one thy seeking soul should cast.

It is to mold ill-shapen forms to beauty's image fair,
To part the flakes of gold from dross that dazzles with its glare;
To snatch from out a mass of earth thought's diamonds rich and rare.

To fashion well the crude young lives that o'er life's threshold pour,
To curb and guide the restless limbs that ne'er were curbed before,
To sift the strains of Knowledge's hymn from out the world's dull roar.

To help the struggling soul along its pathway toward the sun,
To rightly paint the glittering prize for which life's race is run,
To light the lamp which shall endure until the goal is won.

To watch for rays of thought that may with future brightness shine,
To furnish each truth-seeking heart with Wisdom's countersign,
To turn the current of men's thoughts toward Science's holy shrine.

To catch far off the gleam which tells of perfect manhood's dawn,
To strive that lines of truth shall be o'er fickle fancy drawn,
To add the mind's uplifting power to muscle's sturdy brawn.

To feel in all its mighty weight the greatness of the trust,
To realize the feeble strength that lies in human dust,
To lift against a burden that seems oftentimes unjust.

To meekly serve when critics cry that labor is in vain,
To sweep with patience 'gainst the waves that roll from off the main,

To weep o'er efforts lost and then take up the toil again.

To aim with care, and see thy shaft fall wide from off the mark,
To hear rough feet tramp rudely out thy scarcely lighted spark,
To watch the eddying waters gulf thy fondly builded bark.

To sow fair seed and never see the dappled harvest wave,
To give, and have no thankful heart o'er bless the hand that gave,
To long and sigh for honor's crown and find naught but a grave.

But then at least when thou shalt have the earthly record weighed,
And know that better lives were lived by reason of your aid,
To rest in peace and joy because so well your part you played.

— — — — —
All are architects of Fate,
Working in these walls of Time;
Some with massive deeds and great,
Some with ornaments of rhyme.
— The Builders.

THE CULTIVATION IN YOUNG CHILDREN, OF A TASTE FOR THE LITERARY AND SCIENTIFIC.

BY MRS. JULIA MCNAIR WRIGHT.

THIS taste is not only to be cultivated in children, but it is even to be created.

Most children are in a state of mental equipoise and receptivity, and do not so much seek intellectual food as accept what is given to them, or absorb what is left in their way.

There are exceptional children, who have subjective instincts so strongly marked that no unfavorable influences are able to divert or destroy them. Thus, we can conceive of no surroundings which would have made Agassiz other than a naturalist.

But the case with most children is, that we must decide what taste is desirable for them, and then cultivate it in them.

In this work of cultivation there are three almost equal co-laborers,—the parent, the teacher, and the librarian.

Let us assume that the parent is convinced that a love for literature and natural science will develop the child in much which is worthiest in mind, morals, emotions, physique, and will crowd out of the mind and render odious the vulgar, brutal, and vicious. What shall be the method of cultivating the desired taste?

The attention of the child should be constantly called to the subjects in question, and in an attractive way they should be almost hourly presented in order to make them a habit of thought. The flower and its parts, the process of its growth, the bud as the flower-babe asleep, the leaf, the blade, the corn in the ear; the insect with its wonderful wings, its horny case, its clustered eyes; the fly that wheels over the table; the fish with its gleaming scales, its shape fit for gliding in water; the bird, its structure, its nest, its habits; the ant hill and the bee hive and their inhabitants, these should be constantly but gently, almost insensibly, pressed upon the attention of the child. Even the manufactured object, the silk ribbon with its cochineal dye, the paper weight, the rubber eraser, may be made a gate into the wide domain of nature. Can any fashion of magnifying glass be obtained, let the looking through such glass be the choice treat and reward, reserved for high occasions, not too infrequent.

It is the parent's instant duty to give reading matter to that "reading animal," his child. It is a crime against

the forming mind of the child to present to it coarse and hideous trash, either in picture or reading.

If only a ten-cent book can be bought, that book should be good of its kind. We may not be able to get high art for ten cents, neither should we invest the ten cents in comic valentine horrors.

The songs that are sung, the stories that are told, the verses that are repeated to the little ones, should be harmonious; they should have a harmony of word, thought, subject, method, so that they fill the infant mind with a certain divine rhythm, set silver bells ringing in heart and brain, and wed the notion of the good to the conception of the beautiful.

The parent should also encourage the child in the collection of books, and of natural curiosities. The child, from infancy, should be taught to respect books and handle and keep them orderly as peculiar treasures; to purchase books as it has opportunity; to make scrap-books of pictures, poetry, stories, and whatever product of print is worthy of preservation in this way.

Many shortsighted mothers, zealous for neatness, denominate the multitudinous seaside and wayside curiosities which children gather "litter" and "untidiness" and "trash," and quickly cart these collections out, often to the lasting injury of the child.

We commend to these parents the consideration that such collections, grown to a little private museum in the house, will be far more sightly and hopeful than the future pipe, ale bottle, or pack of cards, and it is an imperious demand of nature that children, that all people claim, own, and gather some belongings for themselves.

It is not necessary that the geological collection shall be scattered on the parlor carpet, the "bugs" laid out on the baking-table, or the shells find refuge in mother's work-basket. Indeed a first lesson as to cabinets will be that specimens have a legitimate place and should be ranged and cared for. But every child has a right to a place,—if it be only a corner that can be spared,—for such treasures; and the wise woman, who is "building her home," not a mere brick and mortar house, but that living house,—her children, will provide shelves, or closet, or boxes, the very best that she can, and teach her children pride in, and care for, their specimens.

If she can only procure a handkerchief-box, asked for at a dry goods store when she is shopping, or a raisin-box with a pane of glass over it, she will secure these and make it plain to the child that specimens free from dust, with un mutilated wings and the proper complement of legs and antennæ, insects carefully caught and painlessly killed, are essential to a useful collection. So the wise parent will help the child to dry flowers and mount beetles, and, with observant care, will point out new wonders and beauties.

But it happens that the well-intentioned parent may be ignorant, both of what to do and how to do it, and may have no idea of what books are to be had on the desired subjects.

Here the teacher, fresh from college or the normal, the convention, the institute, the schoolroom, has an errand to the parent as well as to the child. The teacher should diligently suggest to the parent what taste should be cultivated and what methods it is well to take, and what are the means to the end.

But the teacher has a direct mission to the child in this matter. Taste for certain studies is more often roused in the schoolroom than brought to the schoolroom.

A beautiful thought, a melodious verse, a pretty turn to an idea, can be so pointed out by the teacher that the child's intellectual eye awakes and becomes observant to seek out and delight in such beauties of thought and diction.

By the judicious teacher the study of natural science can be so yoked to amusement, rest, and exercise, that the pupil shall scarcely know where one began or the other ended.

A teacher in a country school, when she saw sleep stealing into child-eyes, attention lagging, little mouths yawning like those of young robins, or drowsy heads bowed too low over slates and copy-book, was wont to say, "Here Anne, take your slate and pencil and go draw for me that thistle by the door." "Go, George, and for ten minutes watch that ant hill in the path, and then tell me what you see." "Go, and carefully examine that mullein in the fence-corner, and then describe it to us." It is needless to call attention to the carefulness of observation, niceness of comparison, and acuteness of deduction, and the descriptive powers brought into activity by such a course as this. Will George be likely, hereafter, ruthlessly to trample on the marvelous art city at whose gates he watched?

A corner of the schoolroom reserved, with shelves for birds' nests, wasps' nests, snail shells, and the many wonders that an observant child may find; a box with a glass lid, through which can be watched the metamorphose of some splendid beetle or butterfly; little collections brought from mountain or beach and marked with the small donor's name,—these are the things which shall make the schoolroom as the home called beautiful to the memory and a present palace of delight to the child; and men and women of pure thought and refined taste shall rise up to call the teacher who presided there, blessed. The teacher should secure simple, attractive books on subjects in natural history, and the reading of them should be made a pleasure and reward to the pupils.

The teacher thus zealous in mind cultivating finds an invaluable coadjutor in a well informed librarian.

A conscientious librarian will have a certain acquaintance with the books in the library, their subject-matter, authors, and literary excellences. This will especially be the case in regard to new books; the librarian examining reviews, notices, magazines, publishers' lists and announcements as they appear, will be ahead with the current literature on various topics. Thus in command of the field

the librarian has a mission of suggestion to both parents and teachers and children, and here a conscientious librarian can become a potent educator and benefactor of a community. Very especially is this the case where children or very young persons come to the library to select their own books. They may select an amazing amount of useless or hurtful books merely because they have heard these mentioned or praised by other young persons or because they know of nothing else likely to please them.

A gentleman seeing a girl of ten often at a library, found she drew out and read many books of a generally useless character.

He said to her, "Why do you not read histories or travels, or something about natural history? You can find on these subjects easy, attractive books."

She replied: "I did not know there were such books except for grown folks."

He presented the child's case to the librarian, asking that her reading be helpfully directed, for a time, and requested the child to take, in succession, Abbott's *Mary Stuart*, *Queen Elizabeth*, *Marie Antoinette*, and *Josephine*. These, if not the highest style of historic reading, were as high as the child could then easily comprehend, were well printed, admirably illustrated, graphic, and entertaining.

The librarian reported that the child was delighted with her new field of reading, and under guidance of the librarian she read not only histories, but travels; some of the highest types of juvenile books by our best authors, and was fascinated and led into a new world by *Arabella Buckley's Life and Her Children*, *Fairy Tales of Science*, and other works on natural history.

If parents, teachers, and librarians heartily unite in creating and cultivating elevated, helpful tastes in the young we shall enter on an age of intellectual giants. But giants are a race nurtured neither on chaff nor sweetmeats.

A HAPPY MORNING.

BY M. E. C.

MISS M. was especially happy in being the recipient of a box of beautiful flowers very often, and we, being fortunate enough to be present upon the arrival of ours, so enjoyed the exercises based upon the lovely gift that we cannot refrain from sharing our experience with others.

During the opening exercises the flowers disposed upon a stand in the middle of the ring were made the subject of the morning talk, which developed many facts concerning the parts of plants, their functions, and how we should care for them.

When seats had been taken about the tables both classes were supplied with a tray of blossoms; everything in readiness, a basket containing colored worsted balls was

produced, and presently Miss M. presented a red one, inviting any one who wished to find a flower of the same color to raise the hand. Soon a volunteer stepped forth, and selecting a carnation placed it beside the ball; but not feeling just satisfied with his attempt replaced the pink and chose a geranium, whose color corresponded perfectly with that of the ball.

In this way volunteers were led to match colors until every child had taken his turn and been decorated upon the breast with the flower of his choice. Very gay and happy did the little band look, as all entered thoroughly into the spirit of "the flower-party," seeming to appreciate completely Miss M.'s generosity in sharing her gift.

Later in the morning, as the regular occupation time, the older children were supplied with white, rough-surface papers and paints. Upon the former was a row of faintly outlined oblongs (that form being the one under special development for the day) to be "painted in," each child using the color corresponding to that of the flower he wore.

The class of younger children was provided with papers, like those used by the older children in size and quality, but stamped with two rows of circles, which were to be filled in by pasting over them circular bits of paper having the same color of the flower worn by individual workers. The circular papers were already prepared with a mucilaginous coating, that the little people had simply to moisten with a tiny paint-brush, dipped in water, before laying and pressing them upon the white papers.

More industrious, happier-faced children it hasn't been our good fortune to see for a great while, and the genuine joy with which each small worker received permission to carry home the result of a morning's industry was delightful to witness.

THE HOME IN THE SCHOOL.

BY WINTHROP.

IT may be a question whether it is wise on the part of the parent to encourage children to retail at home and before others all the details of school life. Without question, children should never do or say anything they should be unwilling to relate to their parents, but when they are urged or permitted to repeat conversations between other scholars in the school, or remarks made by the teacher, the danger is that exaggeration, that besetting sin of all children, will dominate in the narrative and there will be given a discolored and distorted recital which may, if sympathy be expressed on the parents' part, result in rendering the children rebellious, hypercritical, and resentful of all correction on the teacher's part. It would be well if all children were given to understand that no criticisms of their teachers were allowed but those strictly reflecting on themselves and made personal by their own misconduct, or, if the children so conceive, given by the teacher in an uncalled for and ungenerous spirit.

But there is another side to this question, and there is a call for severe censure of the teachers herein. Teachers are too often apt and inclined to make severe reflections on children, on their misdemeanors, misconduct, home detentions, etc., and these criticisms are all one-sided, sarcastic, severe, and usually uncalled for. A girl comes late to school, bearing a verbal message that her mother had to send her on an errand which took longer to execute than she expected, and that she would send a written excuse for the tardiness at the next session. The girl enters the schoolroom and delivers her message, standing before the school, but speaking in a low tone to the teacher. The teacher is annoyed that her number of tardy cases is to be enlarged and retorts in a loud and angry tone, "So your mother sent you on an errand, did she? Just as I expected. I suppose you all got up to your house this morning at a very late hour. It's all your mother's fault; no doubt she was tardy when she went to school, if she ever did go. Can your mother write? Then why did she not send me a written excuse? How am I to know you have not been idling your time away playing with the boys on the street? I don't see why you didn't get up earlier; were you all out to some cheap show last night? You needn't cry, tears won't wipe out your tardy mark. Every girl in this room is ashamed of you, and ought not to play with you for a week, your bad conduct may be catching," etc. This is no fancy sketch. It is true. The writer overheard it not so very long ago, in one of our city schools.

Who gave this teacher authority to pass on the acts of parents, to criticise the out-of-school doings of scholars, to impugn the motives of children, to put them in disgrace before their mates? Surely there is a usurpation of authority, nay, even of good breeding in this instance, and it calls for emphatic condemnation.

We do not believe that this is an isolated case, for we have heard children repeat similar remarks as made by their teacher to other children who were in fault,—if fault it were,—only by the direction of parents. In nearly all cases private reproof is more beneficial than public, and the wise teacher will carefully discriminate between the willful wrong-doing of the child and the wrong-doing brought about by the child's obedience to the parent's command. In any case, the parent is not to be criticised publicly; if the teacher has reason to feel that the parent is to blame for repeated infraction of school rules, then the teacher should be womanly enough to seek out the proper person and make her criticisms to the one deserving them. It's a cowardly act to strike the parent through the child.

POWER not exercised is lost; consequently the varied play upon the emotions through the many exercises of the kindergarten must eventually strengthen various powers of the child.

WOULD YOU BELIEVE IT?

BY A SCHOOLMASTER.

HAPPENING into a classroom of boys recently I gave them this question: "You desire to know just how old I am, so I am going to have you figure it out for yourselves and this is the problem. I am twice one-half the age of my twin brother and he is 33 years old, now how old am I?" The boys were in their third year in the grammar grade and were not reckoned stupid or backward by their teacher, yet this statement of the question was so much a puzzle to them, that only four boys out of the 51 present "caught on" to the question and gave a correct answer. I fully expected every one would answer correctly, and requested all to stand and to resume their seats, when an answer was given that was like theirs. Most of the boys insisted that I was 66 years of age, some that I was 49½ years old, others various answers, and but four that I was about as old as my twin brother. In the words of Artemas Ward, "What is the reason of this thushness?"

QUICKNESS.

BY WAUMBECK.

WE recently visited a primary school in Boston, spending three-quarters of an hour which seemed only ten minutes, so pleasantly were we entertained by the charming teacher and the clear, bright, well-behaved boys and girls. We listened to a reading lesson, an exercise in mental, one in written, arithmetic, and a little singing.

There were many excellences, but what impressed us most forcibly was the *quickness* with which the teacher carried on every part of every exercise. Her explanations were brief, rapidly given, her questions pointed, short, and easily understood. The children were trained to give quick replies, to think with astonishing rapidity, and to be on the alert mentally. In less than five minutes an example was written on the board, performed on the slate by 40 pupils, each forming in line in the broad aisle as rapidly as the work was completed, the slates examined, corrected, marked, and the pupils back in their seats. More than 80 per cent. had correct answers and rose *en masse* at the end of the time. Such rapid work seems marvelous in the telling, but the boys and girls seemed to enjoy it as if it were some pleasant game in kindergarten school. There was no apparent discipline. I do not remember that the teacher "spoke" to a single pupil for being out of order. We certainly forgot about "order" in such an active atmosphere of loving labor. This same healthy quickness of mental work was illustrated in the beautiful exercise in Sight Reading which followed Miss Lovejoy's sensible paper before the Primary Section, at the recent meeting of the Massachusetts Teachers' Association. Let us grammar school teachers imitate this saving of time exhibited so frequently in good primary teaching.

METHODS FOR THE SCHOOLROOM.

GRAPHIC GEOGRAPHY.

BY META WELLERS.

GRAPHIC delineation by means of maps and pictures is the natural language of description and as a means of gaining clear and concise conceptions of countries and customs is well-nigh indispensable. In order that the pupil may be able to call up at will before him a clear mental picture of a map, a plant, or a cañon, close observation is necessary, and a habit of concentrating the attention upon the subject under consideration is acquired by means of an agreeable diversion.

To me, one of the most delightful pictures that hangs in "memory's hall" is a little scene entitled *Bordeaux*, in



Olive Tree and Fruit.

my mother's work-box. When a child I spent many a sunny hour in sketching the old vine-covered castle in the distance, while in fancy I roamed through its halls a titled lady. All that I read of France was in some way associated with Bordeaux, a place as real to me as my own surroundings. To see the old town with its amous wine cellars or vaults, in which the choice wine, aden with sunlight, is consigned to darkness and loneliness, like a monk to his cell, in order to become refined, purified, and spiritualized, is still one of my day-dreams.

The red-letter day of my life came when a Sunday-school teacher presented me with a box of water-colors, accompanied by a sketch of red currants and leaves. children are natural artists and innately love the bright and beautiful.

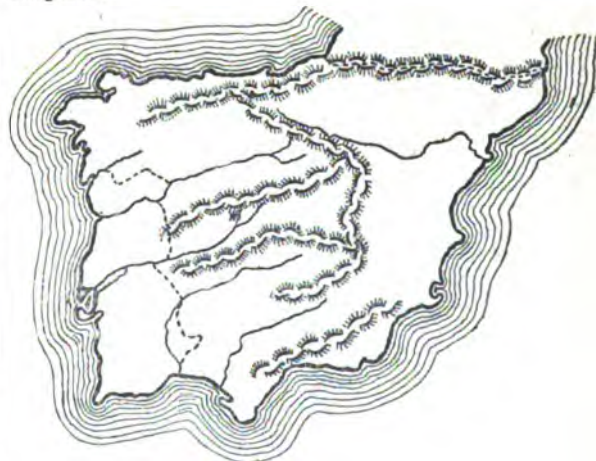
Colored crayons, when skillfully used, are invaluable

in the schoolroom. Used on coarse brown wrapping paper a landscape can be made to stand out in vivid reality before the class; while on the blackboard it is exceedingly effective.

Map sketching should be used only as a means and is of little value when not done in connection with the lesson. No unnecessary work should be performed in map-drawing.

The pupil who sketches the outlines of a state or country may speak of its position, boundaries, its lakes, rivers, or sea-ports. Another may put in the mountains and describe the surface, rainfall, climate, and natural scenery. The next may speak of the drainage of a country as he draws the rivers and lakes, also of its commercial, manufacturing, and fishing interests. In connection with the productions, lines can be drawn in colored crayons showing the approximate northern and southern limits of cereals, tropical, or semi-tropical fruits, using lines of different colors to show the mineral products. In this department of the work I have found *Fisher's Essentials of Geography* very helpful. In locating a town or city let the pupil compare it with his own city or town. Has it as many fine public buildings, schools? etc.

Call attention to the fact that experience and observation have taught us, that if we wish to ascertain the social and moral condition of a people we need only to ascertain the nature of its political institutions and its religious system. Having ascertained these, we shall be enabled to predicate thence the state of education amongst such a people, and shall then be in a position to describe with unerring correctness the state of morals and the national character. This analysis and comparison constitute the most interesting part of the study of Geography. Let us suppose, then, by way of illustration that the map of Spain has been finished up to this point.



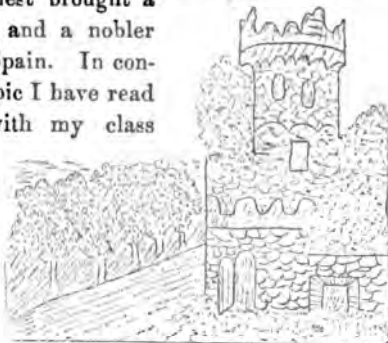
Spain.

Spain is a country that stands alone in the midst of Europe, severed in habits, manners, and modes of thinking from its continental neighbors. It is a romantic

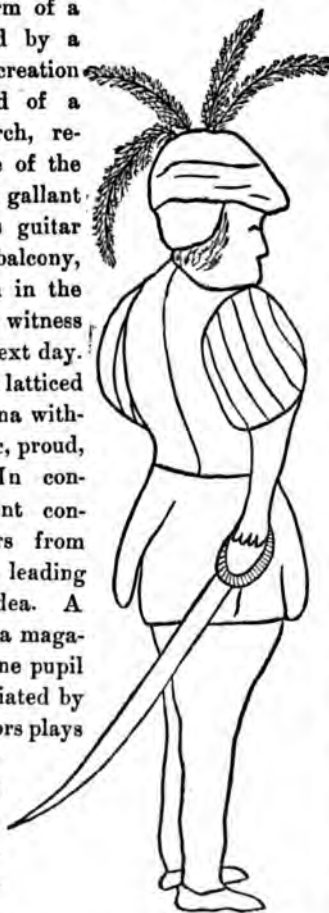
country, but its romance is different from that of England, Scotland, or Germany, inasmuch as it is derived from the brilliant regions of the East, from the school of Saracenic chivalry. The Arabs were a quick-witted, proud spirited, and poetical people and their invasion and conquest brought a higher civilization and a nobler style into Gothic Spain. In connection with this topic I have read *The Alhambra* with my class

and lived with them, as the genial author puts it, "In the midst of an Arabian tale." The same author tells us that "One of the greatest pleasures of the Spaniards is to sit in the beautiful summer evenings and listen to the traditional ballads and tales about the wars of Moors and Christians. This gives us the key to the character of the people; gay, courteous, and indolent when not excited. The Escorial of Spain built in the form of a

gridiron and surrounded by a howling wilderness, the creation of the disordered mind of a gloomy, bigoted monarch, reveals to us another side of the national character. The gallant cavalier who touches his guitar under his lady-love's balcony, while his soft eyes gleam in the moonlight, invites her to witness the cruel bull-fight the next day. She steps from the latticed bower to the bloody arena without shrinking. Romantic, proud, cruel, and indolent. In connection with the present condition of Spain letters from correspondents of our leading papers give the best idea. A very excellent article in a magazine was brought in by one pupil which was highly appreciated by the class. A pair of scissors plays a prominent part in my schoolroom. I can cull at a moment's notice an article on "Ancient Heidelberg," "The Austrian Empire," "The Midnight Sun," "The Heart of Russia," "The Castle of Chillon," or "St. Helena," etc., etc., from my collection. These articles



Private Mosque in the Alhambra.



Spanish Cavalier.

have the merit of being fresh and racy, rather than musty and dry.

Pupils are rarely at a loss for illustrations, yet a caution is necessary; mere copies or reproductions are not desirable. Let the pupil study some picture, then make his own combinations. A minaret of a mosque, a vine-clad hill, a guitar, or a balcony window will suggest a theme as fully as a picture worked out in detail. A lesson such as I have faintly outlined requires time, thought, and research on the part of teacher and pupils. After several days' work on a country I am not unfrequently surprised by a request from the class for a *little more time*, and in order to avoid the danger of giving too much time to a study so intensely interesting to all I fix the recitation for the last half hour of the morning session.

I have said little or nothing of the history of Spain, which I reserve for another paper on *Graphic History*.

THE OPENING AND CLOSING OF SCHOOL.

BY W. E. SHELDON.

THE young and inexperienced teacher is often perplexed in regard to the best methods of conducting the opening and closing exercises of school. Much depends upon the self-possession and ability of the teacher to start the work of each day. The want of method and a well considered plan of procedure will often result in confusion that will make the work of the day unfruitful. The circumstances and character of the school should be wisely considered in these exercises.

No one method will secure the interest of the pupils, which is essential in these important parts of each day's proceedings. *There must be variety.*

Among the many methods the following, which have been tested and approved by experience, may be suggestive and helpful to those who are in doubt how to conduct the opening and closing exercises of their schools:—

The singing of a familiar hymn by the entire school is calculated to put the pupils into a state of mind and heart in harmony with the purposes for which every good school is organized. The influence of music is refining and stimulating as a morning exercise. The reading of a few verses from the Scriptures, selected from the Proverbs, the Psalms, the Gospels, or the Book of James, which present moral and religious precepts, should follow the singing. The reading should be done by the teacher, and the manner and tone of it should enhance the value and dignity of the exercise. The chanting or concert repetition of the Lord's Prayer, led by the teacher, completes the devotional morning exercise, in a way to avoid any reasonable objection that could be made to the exercise.

A good general exercise for the entire school is to require each pupil to rise and recite a proverb, moral maxim, or gem of poetry for one day, and on the next

give in the same manner a *fact* of value and interest. Another instructive exercise is for the teacher to place upon the blackboard, the previous day, the names of half-a-dozen persons eminent in history, in literature, or in philanthropy, and require the pupils to give, on the following morning, brief sketches of their lives and works. To vary the exercise the teacher may make short talks on familiar topics. The exercise should cease as soon as any lack of attention or interest is shown by the pupils. Questions may be handed in by pupils on the preceding day, seeking for information, to be answered by the teacher. The answers should be clear and concise. Long explanations are, as a rule, unfruitful of good results. Questions may also be placed upon the blackboard the previous day by the teacher, to be answered by the pupils on the following morning before the regular order of study and recitation begins. The reading of a short, pathetic, or instructive selection from the best of standard authors with a few words of explanation, will often interest and amuse the children.

Great care should be taken never to exceed the limit of time allotted to such general exercises. About *ten* minutes is all that can be wisely devoted to such introductory work. There should always be allowed a short period for study between the general exercises and the first recitation. This time is frequently used by the teacher in making a record of the absent and tardy pupils, if there be any.


The closing exercises should be very brief. They may consist of a song by the school, or a brief period spent in answering the question, by the pupils,—What have you learned to-day that you did not know before? The hour for closing should be scrupulously observed by the teacher. Time enough should be given for pupils to prepare for dismissal, and perfect order and quiet be required in passing out of the building. Good manners are promoted by the requirement of courtesy in the dressing-rooms and on the way to their homes. The pupils' attention to these "little things" reveals the spirit, ability, and worth of the teacher, quite as much as do the regular exercises of the school. The example and personal influence of the teacher is felt and measured, in the general management, quite as much as in the class work. One of the best means of curing absence and tardiness is to make the opening exercises so interesting that the children will feel that they have suffered a loss by being away at that time. We knew a teacher who entirely overcame this habit by introducing some pleasant exercises, out of the regular routine, which were so enjoyed and talked about by those present as to cause those who were habitually absent or tardy to see, when they came, that they had missed something very interesting.

GIVE the essential stamp of reality to everything you teach. Make whatever is learned a real, living thing with the child.

NUMBERS ABOVE TEN.

BY ANNA B. BADLAM.

Lesson II. — The Number Twelve.

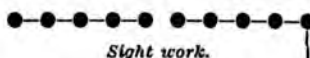
a. First wire:  Sight work.

Second wire: 

Oral Expression: Ten and two are twelve; two and ten are twelve.

Two from twelve will leave ten;
ten from twelve will leave two.

Written Expression:
$$\begin{array}{r} 2 \quad 10 \quad 10 \quad 12 \\ + 10 \quad + 2 \quad - 2 \quad - 10 \\ \hline 12 \quad 12 \quad 10 \quad 2 \end{array}$$

b. First wire:  Sight work.

Second wire: 

Oral Expression: Two 5's and two are twelve; two and two 5's are twelve.

Two from twelve will leave two 5's;
two 5's from twelve will leave two.

Written Expression:

$$\begin{array}{r} 5 \quad 5 \quad 5 \quad 5 \\ \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \\ \hline 10 + 2 = 12; 2 + 10 = 12; 12 - 2 = 10; 12 - 10 = 2 \end{array}$$

c. First wire:  Sight work.

Second wire: 

1st Oral Expression: Five 2's and two make twelve;
two and five 2's make twelve;

Two from twelve will leave five 2's;
five 2's from twelve will leave two.

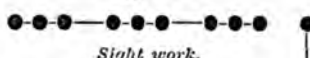
1st Written Expression:

$$\begin{array}{r} 2 \quad 2 \quad 2 \quad 2 \\ \times 5 \quad \times 5 \quad \times 5 \quad \times 5 \\ \hline 10 + 2 = 12; 2 + 10 = 12; 12 - 2 = 10; 12 - 10 = 2 \end{array}$$

2d Oral Expression: Six 2's are twelve; there are six 2's in twelve.

2d Written Expression:

$$\begin{array}{r} 2 \\ \times 6 \quad 2)12(6 \\ \hline 12 \end{array}$$

d. First wire:  Sight work.

Second wire: 

1st Oral Expression: Nine and three are twelve;
three and nine are twelve.

Three from twelve will leave nine;
nine from twelve will leave three.

1st Written Expression:

$$\begin{array}{r} 3 \quad 9 \quad 12 \quad 12 \\ + 9 \quad + 3 \quad - 3 \quad - 9 \\ \hline 12 \quad 12 \quad 9 \quad 3 \end{array}$$

2d Oral Expression: Three 3's and three are twelve; three and three 3's are twelve.

Three from twelve will leave three 3's; three 3's from twelve will leave three.


2d Written Expression:

$$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} + 3 = 12; \begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} + 3 = 12; 12 - 3 = 9; 12 - 9 = 3.$$

3d Oral Expression: Four 3's are twelve; there are four 3's in twelve.

3d Written Expression:

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} \quad 3)12(4$$

a. First wire:  *Sight work.*

Second wire: 

1st Oral Expression: Eight and four are twelve; four and eight are twelve.

Four from twelve will leave eight; eight from twelve will leave four.

1st Written Expression:

$$\begin{array}{r} 4 \\ + 8 \\ \hline 12 \end{array} \quad \begin{array}{r} 8 \\ + 4 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 12 \\ - 8 \\ \hline 4 \end{array}$$

2d Oral Expression: Two 4's and four are twelve; four and two 4's are twelve.

Four from twelve will leave two 4's; two 4's from twelve will leave four.


2d Written Expression:

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} + 4 = 12; \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} + 4 = 12; 12 - 4 = 8; 12 - 8 = 4$$

3d Oral Expression: Three 4's are twelve; there are three 4's in twelve.

3d Written Expression:

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} \quad 4)12(3$$

f. First wire:  *Sight work.*

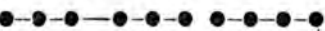
Second wire: 

Oral Expression: Seven and five are twelve; five and seven are twelve.

Five from twelve will leave seven; seven from twelve will leave five.

Written Expression:

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array} \quad \begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 12 \\ - 7 \\ \hline 5 \end{array}$$

g. First wire:  *Sight work.*

Second wire: 

1st Oral Expression: Six and six are twelve; two 6's make twelve.

Six from twelve will leave six; there are two 6's in twelve.

1st Written Expression:


$$\begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array} \quad 6)12(2$$

2d Oral Expression: Two 3's and six are twelve; six and two 3's are twelve.

Six from twelve will leave two 3's; two 3's from twelve will leave six.

2d Written Expression:

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} + 6 = 12; \begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} + 6 = 12; 12 - 6 = 6; 12 - 6 = 6$$

h. First wire:  *Sight work.*


Second wire: 

Oral Expression: Three 2's and six are twelve; six and three 2's are twelve.

Six from twelve will leave three 2's; three 2's from twelve will leave six.

Written Expression:

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} + 6 = 12; \begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} + 6 = 12; 12 - 6 = 6; 12 - 6 = 6$$

i. First wire:  *Sight work.*

Second wire: 

Oral Expression: Eleven and one are twelve; one and eleven are twelve.

One from twelve will leave eleven; eleven from twelve will leave one.

Written Expression:

$$\begin{array}{r} 1 \\ + 11 \\ \hline 12 \end{array} \quad \begin{array}{r} 11 \\ + 1 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 1 \\ \hline 11 \end{array} \quad \begin{array}{r} 12 \\ - 11 \\ \hline 1 \end{array}$$

MORE BLACKBOARDS.

IMPROVED methods of teaching require additional apparatus. The blackboard must be used to a greater extent if the textbook is made less prominent, for the child is a creature of "sight." If your room is not surrounded with blackboards three or four feet wide, then give your committee no peace of mind till you are thus provided. While these boards are being made for you, purchase cloth blackboard, 60 cents a square yard, and tack it up in different places, or mount it and hang like a map. Such extra blackboards will always be handy for preparing lessons before the class assembles, for reviews, for drawing illustrations, or giving the epitome of some oral lesson.

BOOKS ON THE REVOLUTION.

BY CHARLES F. KING.

IN the last four numbers of this magazine a list of books has been given and classified by subjects in reference to various parts of the revolutionary struggle, books suitable for the teacher's and pupil's use. The books in this list, called the "Teacher's Side-lights," are readily divided into two classes; books designed for the teacher's reading at home and those especially adapted for the pupils' reading at home or in the classroom. In the former list appear such volumes as Bancroft's *History of the U. S.*, Von Holst's *Constitutional History of the U. S.*, *Old Land Marks of Boston*, Bigelow's *Franklin*, Lossing's *Field Book of the Revolution*, Greene's *Life of General Greene*, etc.

If teachers wish to purchase a few books of this character, we should recommend Bancroft's *History*, in six vols., published by Little, Brown, & Co., Boston, (\$13.50); Frothingham's *Rise of the Republic*, published by ditto, (\$3.50); and Irving's *Washington*, 2 vols., published by Putnam's Sons, (\$7.00).

All the books referred to for teachers will be found in any town library, catalogued under the author's name.

The books in the second list were: Mrs. Richardson's *History of Our Country*, Houghton, Mifflin, & Co., (\$4.50); *Boys of '76*, by C. C. Coffin, Harper Brothers, (\$3.00); *Camp-Fires of the Revolution*, by U. C. Watson, published by James Miller, 647 Broadway, N. Y., (about \$2.00); *The Boys and Girls of the Revolution*, by Chas. H. Woodman, published by J. B. Lippincott Co., Philadelphia, (\$1.00); *The Romance of the Revolution*, published by Porter & Coates, Philadelphia, (\$1.00). In addition to the above well-written juveniles, we add the names of several historical novels such as Cooper's *Lionel Lincoln*, J. R. Simm's *American Spy*, Cooper's *Spy*, Simm's *Partisan*, *Horseshoe Robinson*, No. 67 in Lovell's Library (30 cts.) and Hawthorne's *Septimius Felton*.

Mrs. Richardson's *History* covers the whole period of American history and is written in such a life-giving, graphic way, as to enthuse the dullest scholar. Read to a class her chapter describing the battles of Princeton and Brandywine and note the effect. Most of the boys in New England have read Coffin's "*Boys of '76*," though we recently found a teacher in the same part of the world, holding a high position, who never heard of the book!

In *Camp-Fires*, the soldiers tell one another about the stirring events in their past history, and thus give very brief and telling descriptions of the various battles. Woodman's *Boys and Girls* contains chapters about the *First Martyr*, *Little Burr*, *The Beautiful Spy*, *The Little Black-eyed Rebel*, *Maids of Fort Griswold*, *The Son of Stark*, etc. In the *Romance of the Revolution* are many stories and anecdotes about Washington, Ser-

geant Jasper, Baroness Reiderel, General Putnam, Ethan Allen, Captain Plunkett, General Marion, etc.

In *Septimius Felton*, the reader is carried to Lexington, and is made to feel as if he had lived there one hundred years ago. Cooper describes the Battle of Bunker Hill in *Lionel Lincoln*; the same author describes the *neutral ground* in Westchester County in his story, *The Spy*. J. R. Simm's *American Spy* brings in the Battle of White Plains. W. G. Simm's *Partisan* covers the time and locality of Camden, S. C. *Horseshoe Robinson*, by J. P. Kennedy, contains a fine description of these same stirring events. For a fuller list of books on the Revolutionary War, we refer our readers to J. Winsor's handbook of the *American Revolution*, published by Houghton, Mifflin, & Co., Boston, (\$1.00). The best maps of the battles are in Carrington's *Battles*, A. S. Barnes & Co.

COLOR LESSON FOR THE LOWEST GRADE — PRIMARY.

BY EMILY A. DELANO.

Materials.—Crayon, prism, worsteds, paper, chart. U

WHAT is our lesson upon this afternoon? *Answer* from class.—Color.

How do these two colors compare? *Individual ans.*—They are alike.

And these, etc.?

Class may show me some colors that are alike.

How do these colors compare? *Ans.*—Unlike.

You may show me two colors unlike.

You may show me three colors unlike.

You may show me two colors alike.

What have we found that colors may be? *Ans.*—Colors may be alike or unlike.

When do all colors look alike? *Ans.*—In the dark.

Then when do they appear unlike? *Ans.*—In the light.

What causes the light? *Ans.*—The sun.

Watch the glass and tell me of what a ray is made. *Ans.*—Colors.

How many? *Ans.*—Seven.

Name them. *Ans.*—Violet, indigo, blue, green, yellow, orange, and red.

What is there to the rainbow that makes you like to see it? *Ans.*—The colors.

How many colors? *Ans.*—Seven.

How many of the colors of the sunlight in the bow? *Ans.*—All.

I will write the name of colors upon the board and Frank may make them.

Green, orange, purple, red, yellow, and blue.

How is green made? *Ans.*—Green is made by mixing—

{ yellow	orange	{ red	purple	{ red
{ blue		{ yellow		{ blue.

How many of the colors were made by mixing?

Which were not made by mixing?

What are they called, and give a reason? *Ans.*—Primary or first colors, because they are not made by mixing other colors.

What colors were used in making the other three colors?

Ans.—Primary colors.

What name do we give these three, and why? *Ans.*—Secondary, etc.

Show me your red like that of rainbow, yellowest yellow, bluest blue, color of ripe orange, color of green grass, purple of rainbow.]

These we call *standard colors*.

Show me a color lighter than your standard red, blue, etc.

What is the lightest color you have ever seen? *Ans.*—White.

How do we get these lighter colors? *Ans.*—By mixing *white* with the standard color.

What name do we give them? *Ans.*—Tints.

What is the darkest color you have seen? *Ans.*—Black.

Show me a red darker than your standard red, blue, yellow, etc.

How was it made? *Ans.*—By mixing *black* with the standard color.

What name do we give it? *Ans.*—Shade.

What is the difference between shades and tints? *Ans.*—*Shades* are darker than the standard color and *tints* are lighter.

Name nine colors we have talked about to-day.

NOTES.

Have the answers in complete sentences. I have omitted them in the writing.

Have paper of the nine colors. I cut the paper into narrow strips, seven inches long. Doubled and sewed several strips of the same color together, forming a loop with ends to slip upon the middle fingers of each hand,—giving one child red, another orange, another black, and so on.

At the close of lesson had gymnastics with the papers still upon their fingers.

I passed among the children with the standard color to let them see whether they had the standard color, tint, or shade.

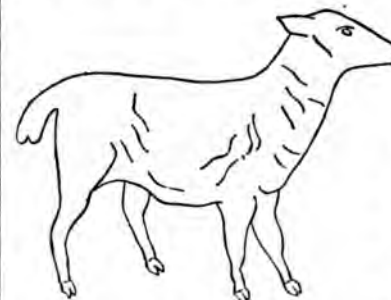
ONE HALF AND ONE FOURTH.

1. $\frac{1}{2}$ is what per cent. of $\frac{1}{4}$?
2. What is $\frac{1}{2}$ per cent. of $\frac{1}{4}$?
3. What is $\frac{1}{4}$ per cent. of $\frac{1}{2}$?
4. $\frac{1}{4}$ is what per cent. of $\frac{1}{2}$?
5. $\frac{1}{4}$ is what part of $\frac{1}{2}$?
6. $\frac{1}{2}$ is how many times $\frac{1}{4}$?
7. What is the sum of $\frac{1}{2} + \frac{1}{4}$?
8. What is the difference between $\frac{1}{2}$ and $\frac{1}{4}$?
9. What is the quotient of $\frac{1}{2} \div \frac{1}{4}$?
10. What is the quotient of $\frac{1}{2} \div \frac{1}{4}$?

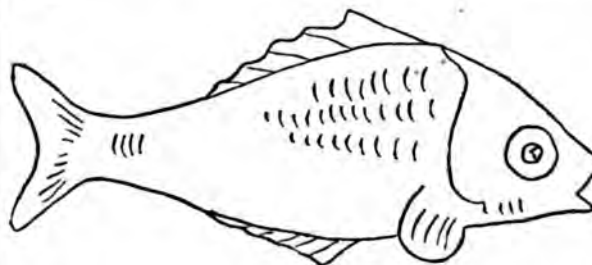
BUSY WORK.

THE primary schools of large cities are utilizing many of the kindergarten ideas. While there are some things in kindergarten work that have no place in the regularly constituted primary work, which requires that pupils make a definite advancement in the ordinary school branches, there are many other kindergarten ideas that can be advantageously used in the earlier years of school life. The general title of "busy work" covers much of the application of these exercises in the lowest grade of the public school. Every teacher who is accustoming a class of little children to school life, who is taking boys and girls who have been under no restraint, who have been allowed time and aids for play, appreciates the difficulty of keeping little children out of mischief when not reciting, of having something always ready with which to keep the children busy.

It would be interesting could we know the variety of devices employed in the cities and large towns of the country. The ingenuity of the teachers of little children would command the admiration of the world, if it were possible to mass the evidences of such



ingenuity. We have been impressed by this as we have been into primary schools in nearly a score of states. One teacher, with no apparent effort, and in little time, has the children first draw simple straight-line figures upon the slates; at another time she has them draw the same upon paper; at another time they cut them from paper, then from pasteboard. Without dwelling upon definitions the children come to know thoroughly all simple, plain, line figures. The children's attention has been upon what they have been doing, rather than upon what they have been learning, but they have learned it just the same.



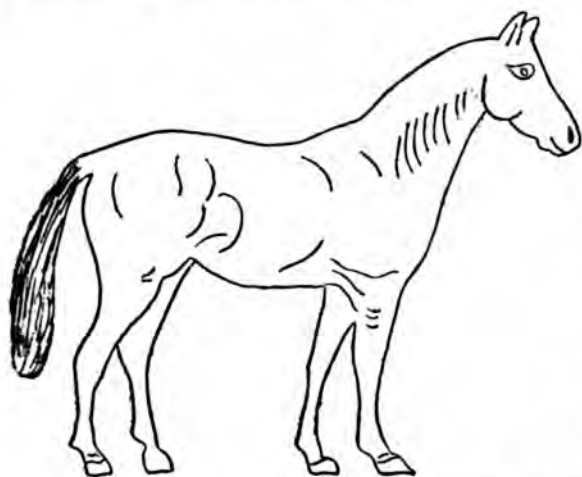
In the Keith School, Chicago, one of the teachers secured for the school little ground-glass slates, which cost but fifty cents a dozen, and furnished the children outline pictures to place beneath the glass to aid them in drawing. In this way it is easy to teach lines, straight and

curved, circles, angles, straight and curved line figures. Not only in simple geometrical figures, but in outlines to be used afterward in the drawing of botanical forms, household furniture, and other simple and attractive things, the teacher can utilize these semi-play moments of the child's school life. Pictures come with these slates, but many of them are too difficult for the "wee ones"



to trace, and the teacher whom we have in mind has prepared a number of simple drawings, which, after they have been traced by the children, form the basis for *language* lessons. The teacher simply traces one each of a number of animals, implements, articles of furniture, etc., in

which children will be interested, and about which they can talk freely in a language lesson. When she has one set,—as many as there are children to be kept busy at one time,—she has the material for as many hours of "busy work" as there are pieces in the set, and for as many language lessons. We have had the cuts made of a half-dozen of these drawings which are in actual use by



her. They are *fac-simile* representations. The teacher will see at once how easy is such work with such outline drawings as these for use with the slates. Where the teacher cannot provide the ground-glass slates, inexpensive though they be, she can use the ordinary slate by cutting her figures from pasteboard, so that the child can hold them firmly upon the slate and outline them.

WOULD the teacher seek to direct wisely the natural activities of her pupils, she must study their individual characteristics, know their capacities and powers, and by guiding and controlling them, promote symmetry and perfection of development.

GEOGRAPHY.—SHAPE OF SKY AND ZENITH.*

(FOR PRIMARY CLASSES.)

BY A. H. KELLEY.

Apparatus.—A hollow rubber ball, the halves of a hollow rubber ball, a pencil, and an umbrella.

TEACHER.—"As we were standing out on the open plain, where the earth and sky seemed to meet all around us, what shape did the sky seem to have?"

P.—"The sky seemed to have a round shape."

T.—"Did the sky seem to us to be round like this hollow rubber ball?"

P.—"The sky did not seem to be round like that ball, but it looked like half the rubber ball."

T.—"Now, think how the sky looked, and how it looks whenever we can see much of it above our heads, and tell me if it looks like one half of this ball."

P.—"I think we see the inside of the sky, and we see the outside of the ball."

T.—"Now, some of you are thinking, and can tell me how the sky looks to us when our horizon can be seen."

P.—"When our horizon can be seen the sky looks to us like the inside of a ball."

T.—"You did nicely, little one, but some of you can do still better. Have you seen the inside of a ball, so as to know how it looks?"

P.—"The inside of a ball looks round up over so (making a motion with the hand to express the meaning), just like the sky."

T.—"How do you know the inside of a rubber ball looks as Jennie says it does?"

P.—"I had a rubber ball with red stripes on it, and when my little baby brother broke it open, it looked just like that."

T.—"Did it look like this half of a rubber ball?"

P.—"Yes, sir, only it was larger."

T.—"When we stand under the great sky that curves over our heads like the inside of the half of a great rubber ball, what part of it seems to be directly over our heads? You see I can put the pencil under the half of the rubber ball here, like Fig. 1; or here, like Fig. 2; or here, like Fig. 3.



FIG. 1.



FIG. 2.



FIG. 3.

Now if this pencil were made long enough to reach the sky, where would it touch? Like which of these figures on the board, just like the positions of the pencil and the rubber ball, would it be?"

P.—"If the pencil were long enough to reach the sky, it would look like the figure 3 on the board."

T.—“Why do you think the pencil would touch the sky as it does the ball as I hold it now?” (holding ball and pencil, as in Fig. 4.)



FIG. 4.

P.—“Because the pencil touches the highest part of the ball now, and if the pencil were long enough to touch the sky it would touch the highest point of the sky.”

T.—“Why do you think the pencil would touch the highest part of the sky, if it were long enough?”

P.—“The pencil would go up straight over our heads to touch the sky, and that is the highest place in the sky.”

T.—“If a boy in South Boston had a pencil long enough to reach the sky, what part of the sky would it reach?”

P.—“I think the boy's pencil in South Boston would reach the highest part of his sky, because the sky is always highest when you look up so” (pointing directly upwards).

T.—“Elmer has told the whole secret. The sky always appears to have its highest point directly over our heads, wherever we may be. It would be the same if we were in any part of the world. The highest point in the sky,



directly over our heads, is called our *zenith*. What is the highest point in the sky directly over our heads called?”

P.—“The highest point in the sky directly over our heads is called our zenith.”

T.—“As every person has his horizon, no matter

where he may be, so every person has his zenith.

“If a half of our rubber ball were as large as this umbrella and our pencil as large as the handle, we could see just where the pencil should be to touch the highest part of the ball. Suppose the umbrella to be your sky, where must the handle be?”

P.—“The handle of the umbrella must be above my head, if the umbrella is to be my sky.”

T.—“Now let us think of the sky as a great umbrella held over us, with the highest part above our head. Do people carry umbrellas?”

P.—“Yes, sir; people can carry umbrellas wherever they go.”

T.—“As people carry umbrellas, keeping the highest part above their heads, so they may be said to carry the highest part of the great sky umbrella above their heads, for the sky seems to change its position when we move, just as the umbrella does when we carry it. Does the sky have ribs like the umbrella?”

P.—“The sky has no ribs like the umbrella.”

T.—“You, of course, see that the sky has neither handle or ribs, and so is more like the half of the rubber ball than it is like the umbrella.”

MUSIC DEPARTMENT.

THE USE OF TERMS IN ELEMENTARY MUSIC.

BY W. S. TILDEN.

ONE of the seeming hindrances to a general progress in the understanding of the elements of music is the great diversity in nomenclature, and the loose habit, not to say carelessness, in regard to the use of the terms employed. In the presentation of topics in other branches of study, exact statement and precise terminology are found indispensable. Music seems to be peculiarly unfortunate in respect to these things, there being little agreement on the part of its teachers or among writers on the subject. If an association of music teachers could do no more than to decide upon and adhere to some uniformity in the phraseology and the terms which are in such constant use whenever a lesson is given, it would be rendering valuable help to musical progress, or at least be taking some of the stumbling-blocks out of the pupil's pathway. Every teacher of experience knows how necessary precision of statement is, and that unless the pupil's mind is to be left in helpless confusion, a definite and unmistakable name must be given to the object with which we are dealing and about which we propose to talk, so that the name may call up at once the specific idea.

Let us observe a few of the vague and misleading expressions often heard in regard to musical matters. One man hears a *note*; another, a *tone*; still another, a *sound*. Again, a *note* is said to be only something to be seen; but the man who says it will straightway point to it and inquire, “What sound is this?” or, “How long is this note?”

A measure containing four quarter notes is sometimes *common time*,—*four-four time*; or *quadruple time*, *quadruple measure*, *four-beat measure*, *four-part measure with quarter notes*. And so with the other kinds and varieties of measure. Then, as to what a measure is: We often hear that a written measure is the space between two bars, and that a measure as heard is from one strong accent to the next. But another says, that is simply a measure in primary form; a measure may have some of its parts on either side of the bar, or from one of the weak parts to the next corresponding part, when it is “a measure” in secondary form, and just as truly a measure as the other.

Another very common kind of talk is of the natural key, key of one sharp, key of two flats, etc., while others say confidently, key of C, key of G, key of B flat, without specifying whether major or minor. Many teachers seem to regard key and scale as synonymous terms, and present the scale always as beginning with the tonic in one octave and ending with that of the next; while some, taking the sounds of a key in regular succession, think it as well to begin with the dominant as with the tonic.

The naming of relative pitch also presents diversity. He who looks upon a major key with its seven pitches as the resultant of three common chords, *dō mē sō, dō tē rā,* and *fā lū dō,* insists that these seven syllables are the proper names for the seven sounds composing a key, being simply a short way of saying tonic, dominant, mediant, etc. While the man who looks at the scale-tune as the vital and fundamental thing in music, and who desires to perpetuate that way of looking at the subject, fights for the numerals,—*one, two, three,* etc.,—as the only names to be allowed as at all suitable for sounds considered in their relative capacity. The chronic instrumentalist, all the while, sticks to his letters through thick and thin as sufficient for all purposes.

To one, the intervals between contiguous sounds in the key are *tones* and *semi-tones*; to another, they are *steps* and *half-steps*, or *large* and *small steps*; yet again, looking at the same thing through the staff only, they are declared to be *major* and *minor seconds*, and nothing more.

We often hear that a given sound is *one beat long*, which must imply, if the beat is performed according to directions, that an instant of time and a considerable duration are one and the same thing; or else, that the beat is to be made in such a way that the hand is in motion all the while the sound is being sung. But others say that the duration is in the measure and parts of the measure, and that the beat only serves as a visible sign for that instant of time when a given part of the measure begins.

NEW YEAR'S EVE.

WELSH AIR, "Nos Gala."

1. Hark! the summons, come, my fel-lows, Fa la la la la la la la la.

2. Shepherds, quit your cares for pleasure, Fa la la la la la la la la.

3. Toil and trouble lie be - hind us, Fa la la la la la la la la.

4. Quick, join hands, and foot it feat - ly, Fa la la la la la la la la.

Crown your hats with hol - ly ber - ry, Fa la la la la la la la la.

Fish - ers, leave your nets and wher - ry, Fa la la la la la la la la.

Think no more of chan - ces drear - y, Fa la la la la la la la la.

In the dance we ne'er can wea - ry, Fa la la la la la la la la.

Hark! the peal - ing bells that tell us, Fa la la la la la la la la.

This must be a night of lei - sure, Fa la la la la la la la la.

While the well-known strains re - mind us, Fa la la la la la la la la.

To the harp that sounds so sweet - ly, Fa la la la la la la la la.

'Tis the eve of new year mer - ry, Fa la la la la la la la la.

'Tis the eve of new year mer - ry, Fa la la la la la la la la.

'Tis the eve of new year mer - ry, Fa la la la la la la la la.

On the eve of new year mer - ry, Fa la la la la la la la la.

Most of us have been accustomed to say that the staff has five lines and four spaces; an eminent writer of late asks teachers to say *six spaces*, inasmuch as those above and below are as truly connected with the staff as those between the lines.

We hear very frequently that a sharp on the F line *raises F* a semi-tone (or a half-step, or a small step, plainly not a minor second). We are assured, however, that F is one of the names for fixed pitch, which makes us think that if F were *raised*, it would be no longer F, and that F sharp is quite another pitch, though upon the staff it is impossible to represent it without the chromatic sign.

Items of this sort might be multiplied; but enough have been adduced to point to the moral of this story. It may be too much to expect that the great army of piano, orchestral, vocal, and elementary teachers, native and foreign, will come to agreement in these things at present; but it should be expected of each individual teacher that he be precise in phraseology, and that he be consistent with himself in the use of such terms as he may, on reflection, select for his own use.

THE AMERICAN TEACHER.

A. E. WINSHIP, } Editors.
W. E. SIELDON, }

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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KEEP your school happy in the work of every day.

SELF-CONTROL is a hundred times better than mere obedience.

THE pupils must have occasion to respect the teacher's judgment and good sense as much as his learning.

GIVE the pupils an abiding appreciation of the fact that knowledge may easily be made a luxury to brighten life and kindle thought.

THE summer schools for 1888 will be better, even, than those of 1887. Arrangements are already being made for the most tempting programs.

EARNEST attention to the work in hand, and not mere listless hearing and aimless doing is the demand of the true modern method.

BEFORE you decry the mental arithmetic "puzzles" which have made strong minds, be sure that you have something else that will make them think as vigorously.

LAZY children, fond of ease, need a deal of sharp treatment, something incisive, quickening to their mind and body. Laziness becomes a vicious habit, and the school must not bear with it.

INSPIRE deep, genuine, quick thought so far as you can. A child that learns to think does infinitely better than one who merely takes facts and learns mechanical processes.

THE teacher must show his appreciation of a child's common sense as well as of his knowledge of the lessons. Sometimes the dull pupil has a better every-day judgment than the scholar who never fails in lessons, and will make an abler man.

THE meeting of the primary school section at the Massachusetts State Teachers' Association was one of the strongest ever held. When Dr. Larkin Dunton, Dr. W. T. Harris, and Superintendent Aldrich take a hand in discussing primary school methods and principles there are attractions unusual in such gatherings.

THE child will never have so many opportunities for good influence as during the school years. The home then does more for him than it ever will after, the Sunday school tries to do more than ever after, and the school has advantages over both these. If the child slides through them and becomes hardened, debased, corrupt, licentious in thought, profane in speech, there is little hope of high virtue thereafter.

THE National Educational Association will meet in San Francisco in July, 1888. This is a long way from New England, but it is no farther than New England is from San Francisco when we invite our California friends to come east; and, besides, our friends on the Pacific Coast offer us mountains and valleys, peaks and precipices, trees and climate, springs and geysers, flowers and fruits, mines and vines to repay the expense twice over.

Do not forget that every child has a composite, many-sided nature, that he is not the same yesterday and to-day, that at one time one phase of his character is emphasized, and at another an entirely different phase. It is the teacher's work to harmonize and unify these so far as possible, giving each in its turn the direction or the check needed. The teacher who sees but one element in the child and treats that only, though it be never so well done, may ruin the child.

THIS is a capital aid in reading. Take a story that the class has not seen, look it through carefully and mark it with a pencil into divisions so that each shall have a distinct idea in the story. Then have one scholar take the book and read the first division; then passing it to the second he reads a division, and so on through the story. Then the first begins, and tells his part of the story, and the next, on to the end. It is a capital test of reading and of story-telling.

THE public school system has gained much at the very point where it was feared that it would be weak. In Massachusetts, for instance, where parochial schools are multiplying rapidly there has been a very general though

undefined impression among Americans that the Democratic party might be tempted to avoid any staunch avowal of loyalty to the public schools, but at the Democratic Municipal Convention on the first week of December, one of the most influential Catholics of the party offered the following resolution which was unanimously carried:

Whereas, The recent attempt by a partisan press and upon the stump to bring into the state campaign the public school question was entirely uncalled for and unpatriotic; therefore,

Resolved, That the Democratic party regards the public school system as the very foundation of our free institutions, and refers with pride and satisfaction to its support and advocacy of all measures calculated to make the public schools, in fact as in name, free to all, whether rich or poor, without regard to race, creed, or color.

SCHOOL CHILDREN IN PRINT.

THE *Chicago Daily News* publishes a series of Christmas stories written by children attending the public and private schools of that city and county, for which it has set apart \$300 for prizes. Ten dollars each for fifteen of the stories receiving the highest number of votes; five dollars for twenty of the second best. The ten best out of every one hundred selected by competent readers are published, giving the age of the writers. The editor has been untiring in his efforts to give the young aspirants for literary fame a fair chance. As a bit of enterprise, this venture is in keeping with many other popular efforts of the *News*. The results have been a revelation to parents, and to teachers even, of the possibilities of story-writing with young children, who enjoy writing stories quite as much as listening to them.

The child is at home in the realm of Fiction, and in the domain of Wonderland. To him, fairies are veritable beings, who by a touch of their magical wands can transform a humble home into a regal palace. He delights in creating his own world, and peopling it with the creatures of his own imagination.

This experiment of the *News* will probably teach instructors that composition-writing can be made fascinating, when the children are encouraged to write what they delight in, rather than upon subjects of which they know nothing and care less.

THE AMERICAN FLAG.

IN a resolution of Congress, June 13, 1777, it was decreed "that the flag of the thirteen United States be thirteen stripes, alternately red and white; that the Union be thirteen stars, white in a blue field, representing a new constellation." This flag was established by law in July of the same year. The plan was to add a new stripe for each new state admitted to the Union, but by the rapid admission of new states the added stripe made the flag too large, and by a later act of Congress the stripes were reduced to the original number, thirteen, and a star was added to the Union on the introduction of a new state.

As at present constructed, the flag is symmetrical in shape and proportion. The infantry flag is six feet six inches by six feet, and has seven red and six white stripes. The first stripe at the top is red, the next white, and so on alternately, the last stripe being red. Each stripe should be half as many inches wide as the flag is feet long; and the Union should be one third the length of the flag, and cover seven stripes in width. These details differ slightly in flags used in different organizations, in some of which the flag is six feet six inches by four feet four inches, the length being one half longer than the breadth.

In the war department the stars in the field are usually arranged in the form of a large star; in the navy they are arranged in straight lines, perpendicular and horizontal. The ordinary flags used for display are generally made with no special regard for the fixed rules for their construction.

A MAGAZINE CLUB.

IN many of the schools in this country clubs are now being formed for the purchase of suitable reading matter for the coming year. The principal or any active teacher can easily start such a club by a little personal effort. We know schools where such clubs have existed for years. In one school district in Boston, there are two clubs, both containing seventeen teachers. Seven or eight teachers are enough for one organization. After the leader has obtained the consent of some such number of fellow teachers, he should make out a list of fifteen or twenty magazines, and ask each member to mark the choice of the first eight magazines, if there are eight members in the club.

The following eight magazines have been selected in one club in Boston: *Century*, *Harper's*, *Scribner's*, *Forum*, *Popular Science*, *Eclectic*, *St. Nicholas*, and *Wide Awake*.

The cost to each member for such a grand feast of reading will be about \$3.50, possibly less. The member who prefers the *Century*, and marked it as his first choice, has the first reading of that magazine; the maximum length of time for detention is usually one week.

At the end of the season it is customary "to auction off" the old magazines, give them to the leader for his extra labor in looking after the business, or distribute them among the members according to first choice.

In the list of magazines given above, what a multitude of articles during the year which bear directly or indirectly upon school work! What a host of pictures to use in teaching geography, history, biography, etc! We have sometimes counted fifty schoolroom pictures in a single *Harper* or *Scribner*. Just to read to a class the article on Chili, in the September *Harper's*, would teach more geography about South America than a week of ordinary study from the textbook.

HELPS TO THE STUDY OF GEOGRAPHY.

BY MARION T. KITTREDGE, FITCHBURG, MASS.

II.—Mountains.

1. Lines along which the yielding to horizontal pressure has taken place.
An elevated mass of earth and rocks.
Hills less than 1,000 feet; mountains more.

2. Definitions.

a. Chain.

An elevated portion of the earth's crust formed by horizontal pressure.
Were once marginal sea-bottoms.

b. Range.

Part of mountain chain formed by *lateral pressure* and *erosion*.
Parallel with other ranges.
Separated by *longitudinal* valleys.

c. Ridge.

Part of a range formed by erosion parallel with it and separated by long valleys.

d. Parts, same as hill.

e. Crest.

Undulating line, showing intersection of slopes of a range or ridge.
1. Passes, depressions in this line.
2. Transverse valleys.
3. Peaks, highest points made by transverse valleys.

f. Trend, general direction of chain.

g. Knot, intersection of ranges and ridges.

h. Height, vertical distance above sea level.

Ascertained by

Triangulation.

Barometer.

Boiling point of water.

Formation of Mountains.

I. Deposition of sediment.

- a. Unequal radial construction as earth cools. *Le Conte*, p. 168.

Long radii, land masses.

Short radii, sea-bottoms.

- b. Sediment deposited on edge of continents. *Le Conte*, p. 254.

- c. Subsidence of sediment. p. 255.

- d. Enormous depth of sediment. p. 257.

- e. Heat due to pressure in presence of water.

1. Softened sediment.

2. Weakened underlying crust.

II. Lateral pressure. Proved by plication. Slaty cleavage.

1. Folding.

- a. Accumulated layers.

- b. Lines 1. Strike.

2. Dip.

3. That of edges.

Both inclined give peaks.
One vertical and other horizontal precipices.

2. Fracture.

- c. Regularity of outline.

- a. Summits wedge-shaped.

- b. Fracture clear and sharp, steeply inclined.

- c. Granite or metamorphic axis.

- d. Disintegration leaves neighboring hills.

III. Erosion.

- a. Agents. *Le Conte*, p. 260.

1. Rivers } Tend to make convex slopes and rounded peaks.
2. Glaciers. }

3. Waves and tides.

4. Oceans.

- b. Results. *Le Conte*, p. 246.

1. Horizontal strata leave table mountains.

2. Gently folded,
Synclinal ridges.
Anticlinal valleys.

3. Inclined.
Highly, depend on dip, perpendicular or inclined.
Gently inclined table lands.

Topics for Reading and General Discussion by Class.

1. Age of mountains.

- a. Time necessary to deposit sediment.
- b. Time required to upheave sediment.

2. Office of mountains.

- a. To aid in formation of springs.
- b. To aid flow of rivers.
- c. To control drainage.
- d. To show power of their Creator.

3. Effect on people.

- a. Independent.
- b. Isolates, checks civilization.
- c. Prevents union for protection against enemies.
- d. Ingenders sectional feeling.
- e. Inspires sublimity of thought.

Reference books, same as on "hills." *Ruskin's Modern Painters*, Vols. I. and IV.

SUGGESTIVE.

1. What is 6 per cent. of 30?
2. 6 is what per cent. of 30?
3. 30 is what per cent. of 6?
4. 6 is 30 per cent. of what number?
5. 30 is 6 per cent. of what number?
6. What is 30 per cent. of 6?

ILLUSTRATED WORK.

BY A CHICAGO TEACHER.

SINCE the National School Exhibit in July, questions have arisen as to the educational value and utility of illustrative work, and in Chicago and vicinity and probably in many other American centers, conservative educational experts are calling a halt in the overdoing of illustrative work. Those who are most anxious for the success of illustrated work will do well to pay more attention to the ends sought than to methods of attaining those ends. There is little doubt, in this age of craze for methods, that, when the aim is distinct, successful methods will readily follow.

The first aim of all illustrative work is to give a true representation of facts: for this purpose, maps, diagrams, and objects are indispensable in teaching geography, history, and mensuration. But the highest aim should be the representation of thought. Everything done to render pictures attractive at the expense of their meaning is unfortunate. The drawings that convey the highest idea of power are those in which not a touch is thrown away. To obtain this result both the thought to be represented and the means necessary to the representation must be thoroughly known. A laboriously copied picture may be very pretty, or amusing, or ingenious, but it is of no special educational value, is often a waste of time and raw material. Everything bearing the stamp of *bona fide* imitation must be rejected by the teacher who desires to interpret illustrated work aright. All ostentatious decoration and superfluous ornamentation are vicious, because results are subordinate. We should remember that thought is above mechanical art.

PHONIC WORK.

BY AN EXPERIMENTER.

MISS G. to-day was illustrating by means of phrases on the blackboard the meaning and sound of certain words. One phrase was, "The huge anvil," and every other boy when called on to pronounce the words, gave an initial *k* sound to the word "huge," calling it "kuge." She said she was having a difficult time with the word, and asked for help. The problem was solved in a few moments as follows: I wrote the word "hew" on the blackboard; no one in the class recognized the word; then I wrote "few," and this was sounded; then "mew," "dew," "jew," "new," and correct sounds were given of these words. Then I wrote the words "how," "hoe," "high," "hoop," and these were pronounced distinctly and correctly. The breathing was slightly emphasized, and attention called to it. Then the letter *u* was written and sounded; then *hu*, and the breathing particularized and the sound given, and finally the *j* sound of the word of "huge" was made, and then the whole word was written on the board. There was no difficulty in pronouncing the word after this, and

the exercise took less than five minutes, and claimed the attention of all.

But why this roundabout way to this end? Largely because it was at that time and for that class the best and only way, and also because it secured the end desired,—the correct sounding of the word,—in one tenth the time, and fixed it permanently, as I believe.

WORD ANALYSIS AND WORD HISTORY.

BY ARISTINE ANDERSON, DETROIT, MICH.

CLASSES in language and grammar have become intensely interested in the study of words and much more proficient in the use of language, when I have set aside days for word analysis, word history, and word recreation.

Among the many tabular forms that may be used for word analysis, I have found the following as simple as any, at the same time it is comprehensive, and the parts of the words follow each other in their natural order. Very simple words need to be taken at first, but I give one or two that use the whole table, or show of what value the "work" column is:

Prefix.	Root.	Work.	Suffix.	Word.	Class.
re	move	-e + a	ble	removable	adjective
re + af	firm			reaffirm	verb
com	press	+ i	ble	compressible	adjective

I would especially avoid teaching that "e is changed to a," etc., though this statement is often met with in books on word analysis. Scholars have said to me, "How can e change to a?" It can't, so what is the use of saying so. It is certainly as easy to teach that the *e* is dropped and the *a* or *i* put in its place.

I also find that it is better to keep the *ble* as the suffix, and let the preceding vowel be used as part of the work, though *able* and *ible* can be used.

With advanced classes the Latin and Greek roots can be placed side by side with the "everyday roots," if desired.

By practice of this kind once a week the scholars soon learn the regular formation, the exceptions, and the analogies in the English language, and become ready to fully appreciate the beauties of Whitney, Max Müller, Trench, and Crabbe, in their several departments.

Word history may be made a study in philology and an exercise in essay writing at the same time. A word may be given to each scholar,—each may choose his own, or words may be written on the board for the class to choose from.

Scholars are amazed and delighted at the curious manner in which words have been developed, at the length of time they have been in use, and at the changes in spelling that have accompanied the growth of some words.

RECOMPENSE.

BY LUCY AGNES HAYES.

LIVE on, brave heart! Be calm, thou throbbing brain!
 Thy toil, though now unpaid, shall yet find recompense.
 There's need to-day of faithful ones like thee;
 The world has need of faith and innocence!

Live on, O friend! There's strength in duty done;
 What, though thy name by men be never known?
 Work truly done, all lovingly bestowed,
 Is fittest seen by God's pure eyes alone!

Love on; toil on! Achieve the highest good!
 The stars of morn are chasing heavy night;
 The rest, the sympathy that thou hast sought
 Shall be thine own, ere-long, when it is light!

MEMORY GEMS FOR JANUARY, 1888.

BY SUSAN TRUE, SALSBURY POINT, MASS.

MONDAY, 2D.

A A glad New Year is given
 By God, our Father, dear;
 A blessed gift of Heaven,
 A happy, happy year.

TUESDAY, 3D.

True worth is in being, not seeming;
 In doing each day that goes by
 Some little good; not in dreaming
 Of great things to do by and by.

WEDNESDAY, 4TH.

Remember thy Creator, God,
 In the sweet season of thy youth;
 Make him thy confidence and trust
 Whose thought is love, whose word is truth.

THURSDAY, 5TH.

There is nothing so kingly as kindness,
 And nothing so royal as truth. —Alice Cary.

FRIDAY, 6TH.

When corruption is discovered, the judgment of the
 people should strike like the thunderbolt. —Charles
 Sumner, 1811

MONDAY, 9TH.

Each day and every day
 Do what is right;
 Right things in great and small. —Alice Cary.

TUESDAY, 10TH.

Be you tempted as you may,
 Each day and every day,
 Speak what is true. —Alice Cary.

WEDNESDAY, 11TH.

The bravest are the tenderest;
 The loving are the daring. —Bayard Taylor, 1825.

THURSDAY, 12TH.

Sorrows borne with patience
 Benisons impart,
 But there are no blessings
 For a thankless heart. —Marian Douglass.

FRIDAY, 13TH.

Don't tell a lie, dear children,
 No matter what you do;
 Own up and be a hero,
 Right honest, brave, and true.

MONDAY, 16TH.

Be gentle and loving;
 Be kind and polite.

TUESDAY, 17TH.

Be thoughtful for others;
 Be sure and do right.

WEDNESDAY, 18TH.

How far that little candle throws his beams!
 So shines a good deed in a naughty world.

—Shakespeare.

THURSDAY, 19TH.

God helps those that help themselves. —Benjamin
 Franklin, 1706.

FRIDAY, 20TH.

Do your best, and leave the rest,
 And never give up your trying. —James Watt, 1736.

MONDAY, 23D.

Every day you do your best
 Is a vantage for the rest;
 Don't complain; every gain
 Is making your best still better.

TUESDAY, 24TH.

Be not weary or downcast;
 Patience holds the gate at last.

WEDNESDAY, 25TH.

When your mother speaks, obey;
 Do not loiter, do not stay;
 Wait not for another tick;
 What you have to do, do quick.

THURSDAY, 26TH.

Bad Temper, go;
 You and I shall never agree,
 For I will always kind and mild
 And gentle try to be.

FRIDAY, 27TH.

Speak the truth!
 Never do a thing by stealth;
 Not to gain a nation's wealth,
 Let a falsehood stain thy youth.

MONDAY, 30TH.

Whatever you are, be frank, boys!
 'Tis better than money and rank, boys!
 Whatever you are, be kind, boys!
 Be gentle in manner and mind, boys!

TUESDAY, 31ST.

Winter day! frosty day!
 God a cloak on all doth lay;
 On the earth the snow He sheddeth,
 O'er the lamb a fleece He spreadeth.

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eos.

ANSWERS TO QUERIES.

313. How is celluloid made?

The bulk of celluloid is cellulose or vegetable fibrine, which is first reduced by acids to gun-cotton. Camphor is added to the gun-cotton and the mixture condensed in cylinders with a pressure of two thousand pounds to the square inch. At this stage the substance can be moulded by heat and pressure into any shape.

331. What is the capital of British Columbia?

Victoria is the capital, according to *Lippincott's Gazetteer* and *Johnson's Encyclopedia*.

340. Why does the heat seem oppressive when the air is moist?

Evaporation is a cooling process. When the air is moist there is less evaporation from the pores of the skin than when the air is dry.

346. Who is our present minister to England?

Edward J. Phelps is our minister to England.

353. Why does the city of Tokio burn down every seven years?

Probably for the same reason that the fiber of a man's body changes once in every seven years. The One who has the matter in charge thinks best that it should.

317. What gems are the emblems of the Twelve Apostles?

Jasper, St. Peter; Sapphire, St. Andrew; Chalcedony, St. James; Emerald, St. John; Sardonyx, St. Philip; Carnelian, St. Bartholemew; Chrysolite, St. Matthew; Beryl, St. Thomas; Chrysoprase, St. Thaddeus; Topaz, St. James the Less; Hyacinth, St. Simeon; Amethyst, St. Mathias. L. A. H., Boston, Mass.

332. Why is it not painful to thrust a pin into the flesh just above the knee?

It is. If you doubt it, try it,—on yourself.

333. Why will a blow sometimes stop the heart beating?

Just as electricity,—a stroke of lightning,—would do the same; by the shock to the nervous system, causing temporary paralysis of the nerve-centers which regulate the heart's action.

334. When an injury to the nose has been remedied by transplanting skin from the forehead, why is a touch to the former felt in the latter?

It is not. The (contrary) belief is a vulgar superstition.

335. What causes the pylorus to open and close at the right time?

This is referred to the class of organic reflex actions, of which defecation and urination are other examples. We may say that when the food has been reduced to the proper (consistency) character it produces an impression upon the (organic) nerves of the mucus membrane of the pylorus, which causes it to relax or open, and after the food has passed through, to contract again.

333. Why do red-hot iron and frozen mercury produce the same sensation?

The sensation in either case is not that of heat or cold, but is that caused by the destruction of tissue.

337. How many rows of hairs are there in the eyebrows?

Perhaps you can determine for ourself by counting them. We know of no rule.

342. How can an extensive burn cause death by congestion of the lungs?

By causing irritation (or stimulation) of the vaso-constrictor (organic) nerves, thereby causing contraction of the capillary vessels near the surface, and sending the blood to the internal organs.

354. Analyze the sentence, "There came to the beach a poor exile of Erin." How would you parse *there*?

I would call "*there*" an *expletive*, adding nothing to the meaning, but enabling us to transpose the subject and predicate. In analyzing the sentence I would omit any reference to it, calling "A poor exile of Erin" the *subject*, and "came to the beach" the *predicate*. B. F. TWEED, Boston.

355. What is the name of the island in the Mediterranean Sea which is known as the "Light House"?

Stromboli, which has given out lava for two thousand years, and from its constant light has been called the Lighthouse of the Mediterranean. It is one of the Lipari Islands.

L. F., Colorado Springs, Col.

356. Should a person attempt to teach drawing without special training for the work?

One cannot teach drawing in the technical sense successfully without having had special training.

363. Place the word *only* in three different positions in a sentence, and explain the change of thought expressed.

The man being *only* (wholly) wicked showed that his *only* aim (one particular purpose) was to pursue *only* (above all others) such a career as he had chosen.

364. Define a decimal fraction, etc.

A decimal fraction is one or more of the ten equal parts of any unit. Its excellency consists in its capability of being used essentially like common whole numbers. Example: Add four units to four tenths. Four units = 40 tenths; now add 40 tenths to 4 tenths = 44 tenths, or 4.4. If the name and meaning of the decimal is well understood, it has no peculiar defect "as an instrument of computation."

CORRECTIONS.

Query 325 is answered by "W. E. S." in the December number, "We find no record of any such transaction." Barnes' *Popular History of the United States* says, on p. 419, speaking of the wife of Andrew Jackson, "She had been the wife of a dissolute man, from whom she had obtained a divorce, immediately after which Jackson married her. A number of years later he learned that what he had understood to be a divorce was only the granting of a petition to sue for one. He immediately procured a license and had the marriage ceremony performed the second time."

E. W. W., Kendallville, Ind.

(Who thoroughly enjoys your excellent and truly practically educational paper.)

[Thanks to E. W. W., who is correct in his statement, and his view is confirmed by James Parton, in his *Condensed Life of Andrew Jackson*, page 57. Jackson was married to Mrs. Robards, at Natchez, by a priest of the Catholic Church. Two years later information was obtained that at the time of this marriage the divorce claimed by Robards had not been legally completed. After Jackson and Mrs. Robards had been married two years the divorce was really granted in a Kentucky court. Upon ascertaining this fact Jackson had the marriage ceremony performed a second time by a Protestant clergyman in the neighborhood of Nashville.

W. E. S.

QUERIES.

387. Where was Napoleon's second exile?

388. When and under whose administration did the "Know-nothing" party arise?

389. Where is "New Leinster" island?

390. The sum of 2 numbers added to the sum of their squares is 18, and 10 times their product is 60; what are the numbers?

391. Equation or expression $(x-y)(x^2-z^2)-(x-z)(x^2-y^2)$. To resolve this into factors please explain method.

392. Define the "rational" and the "sensibile horizon."

393. What are rhetorical pauses? Define their use.

394. A tree 75 feet high was broken in two parts, the top striking the ground 15 feet from the base. At what height was the tree broken in two?

395. At what time between 9 and 10 o'clock will the hour and minute-hand of a watch form a right angle?

THE KINDERGARTEN.

FOR LITTLE HANDS.

BY ELEANOR BEEBE.

I.—Nest.

ROCK-A-BY babies upon the tree-top,
When the wind blows the cradle will rock,
When the bough bends the cradle won't fall,
But safely swings rock-a-by, babies, and all.

II.—Cocoon.

Rock-a-by baby upon the tree-top,
When the wind blows the cradle will rock,
When the spring comes the baby creeps out,
And there goes a butterfly flitting about.

- I. The hands shape the nest; thumbs are the young birds; nest sways gently at first, then harder as the wind blows.
- II. Form a cocoon with the hands; one thumb hidden within for the chrysalis; fore and middle fingers in rapid motion represent the butterfly.

NOTES.

THE one healthful stimulant with which to inspire young children is an enthusiastic love of learning.

"COME, let us live with our children," the motto Froebel adopted, should be the motto of every true kindergarten teacher.

THE power of self-control, is generally weak in young children, and it should be the great aim of the teacher to encourage and strengthen this power.

ENLIST the intelligent sympathy of the little children for the dumb animals. This can be done by short stories and brief conversations on their usefulness and value to man.

VIVACITY of manner, aptness to describe objects, a fertile imagination, and simplicity and clearness of statement are special gifts of great value in the teacher of young children.

THE OCCUPATIONS of the kindergarten should lead the child to become familiar with the things that surround him in the material world, what Miss Brooks describes as the "*selected symbols, the primer of the language of nature.*"

"Through outward, inner life to waken."

"By the senses is the inner door unsealed;
When the spirit glows in light revealed,
Through the senses the child's soul lies open."

"Sing what thy heart and vision meet,
And gild them use-neglected street."

ON the Sunday before the death of Froebel, a little girl brought to him some choice flowers, which he welcomed with delight, and although too weak to lift his hand he reached it out to her and drew her little hand to his lips. He asked that his flowers might be cared for, in these words: "Take care of my flowers and spare my weeds; I have learned much from them."

MORNING TALK.

BY M. L. VAN KIRK, PHILADELPHIA.

"DO your children love to come early to kindergarten?" asked a kindergartner. Yes, I replied; some of them come a half hour before the time for opening. The fathers leave them on their way to business, and others come because they love to. It is important to begin the day right, and to occupy them happily and profitably. I will tell you what I saw the children doing in Miss Miller's kindergarten yesterday. I went to hear that oyster story which she had promised the children on that last animal day. I went a full half hour before the kindergarten began. Seven children were there; three of these children were large boys, who belonged to the advanced class. What do you think they were doing? They were all busily engaged sewing, glancing at the clock anxiously to see if they had time to finish their designs. I was surprised, and asked one of the boys if he had not outgrown sewing. Yes, he said; but we are still fond of it, and come early to sew. They then turned away to converse with each other about the colors they were using. Miss Miller was at the low blackboard drawing the oyster in his shell, and the little children were gathered around her helping and suggesting as she put in the lights and shadows. There seemed to be a hum of voices, as if the children were freely enjoying themselves in their work. I asked Miss Miller if she was troubled by these early visitors. She said, "Not now, for I have learned how to occupy them. At first I did not know how to do my own work quietly and easily, and their presence disturbed me, and the children, feeling this state of things, were often noisy and restless. Now when I am quiet and busy they are the same." When it was half-past nine o'clock we took our seats, and after singing "Father, we Thank Thee for the Night," and chanting "The Lord is My Shepherd," Mildred, who had just come in, seeing the pictures on the blackboard said, "Good morning, Miss Miller; am I too late to hear 'The Oyster's Own Story'?" "No, dear, I have not forgotten my promise; but before we begin it we will sing,—

"Well, shell, and what is the message
You're trying to whisper to me?
I know very well you have something to tell,
Some tale of the bright blue sea."

"A long way from here, several years ago, there lived a queer little person all by himself. He had neither hands, arms, legs, or feet; but he was very determined to do the best he could with what he had. When he was quite small his mother put him on some rocks, just under the edge of the water of the sea. The brave little fellow held on tightly, and by using his body he managed to build a stone house just large enough to hold himself. It was, indeed, a very convenient house, for, as he had no arms with which to open windows or doors, he put a hinge on the back part of his house so that he could lift up the whole top of it by simply raising his body. In the morn-

ing when he woke up he would open his door very wide and let in plenty of water, so he could take a bath. Then he would get his breakfast, a very easy thing for him to do. He would open his door and keep very quiet. Some foolish little fish would be swimming around, and seeing a nice house open would peep in; then our friend would quickly close the door, and keep the prisoner for his breakfast. As he was very fond of raw fish, just as we are fond of raw oysters, he didn't need a cooking stove; but as soon as he had caught his breakfast he would eat it.

"One night, after he had lived in his stone house quite a long time, the ocean seemed to be angry; it dashed against the rocks so furiously that it broke large and small pieces off them. Our poor little friend was so frightened that he lay quite still, and finally went to sleep. In the morning, when he woke up, he was very hungry, and as the waves were much quieter he decided to open his door. As usual, he took his bath first; but the water was so full of dirt that the waves had washed off the shore, that he took a very short bath. Then came his breakfast, a tiny gold-fish. Our little friend was very fond of gold-fish, and he was enjoying this one so much that he ate it very slowly. Suddenly he felt a queer pain in his side; it felt as if a pin struck him; so he left his breakfast to find out what it was. He found it was a little sharp piece of stone that the waves had broken off the night before, and it had floated in when he took his bath. Poor little fellow! no hands to take out this ugly stone. At first he thought he could get it out by squirming his body, but the more he squirmed the more it cut him; for remember, I told you he was a brave little person; he didn't commence to cry, but tried to think of the best thing to do. Finally he remembered that he had some mortar left after finishing the inside of his house. So he got some mortar on his body and slowly began to cover it. He couldn't work fast, but by patiently keeping on he finally got it all covered, and as soon as the mortar dried it was very smooth, so that he could move around with perfect comfort.

"For some time after this things went on very smoothly and pleasantly; but one day he heard a very queer splashing noise above him. He quickly closed his door, because he knew there were a great many animals in the sea that loved to eat little fellows just like him. In a few minutes, which seemed to be hours, his house was pounded so hard that the mortar which fastened him to the rocks broke, and he was thrown down on something hard. The little fellow was so frightened that he lay very still, but finally ventured to open his door just a crack. He couldn't see very much, but he found he was on a pile of houses, just like his own, and he still heard that splashing noise that sounded very much like oars dipping in the water. Suddenly there was a bump as if the boat, or whatever he was in, had struck against the shore, and then he was picked up and thrown down on the ground with all the other houses. Poor little fellow! he was so

tired and sore from being thrown around that he didn't care to open his door and find out where he was. But after a while he began to feel so dry, he wanted a drink so badly, but he couldn't get it, for you remember he couldn't walk, or even crawl. So he lay still very patiently all day and all night, just as hungry and thirsty and miserable as he could be. In the morning he waited and waited for somebody to bring him something, but no one came and finally he died.

"Some time after a man was walking past this pile of houses. He stooped down and picked up one of them in his hand, and it was our little friend's house. He opened the door very gently, and found the little master of the house dead within, and also saw the mortar-covered stone that was now so beautiful, and he called it a pearl. He took it out and closed the door. Then he carried the house to the ocean and buried our little friend in the waters he loved so well. And if the brave little fellow could have seen the joy and delight of the little lame boy who received the beautiful pearl, I am sure he would have been very glad that he made some one happy, although he had no hands or feet or legs, and was only an oyster."

EVERY-DAY LESSONS.—VII.

BY LUCY WHEELOCK.

FOLLOWING the third gift come the square tablets of the seventh, corresponding to the faces of the little cubes. At the first lesson one square is given to each child to examine, after a cube has been dressed in red by putting a tablet of that color upon each face.

One child of four discovered at once that her square was *flat, thin*, that it had *four corners and edges*, and a *red face* and a *white one*.

At first this little square might seem scanty material for a whole lesson; but we are not training a generation of Peter Bells, and our children will not feel that this is a little square and can be nothing more. Each child's fancy is drawn upon to see in it some object related to his life. *A board, a floor, a book, a box, and a table* are suggested, which last suggestion is seized upon as the most available for developing the essential characteristics of the square. So the square becomes a table, and the table is set for Mary's birthday party. Mary wishes to have eight children at her party. How many can sit at the sides of the table? Where can the others sit? Some of them must sit by the corners. How many?

Little beans, or Mrs. Hailmann's dots are distributed for the guests. Mary sits at the front of the table, and Susie is opposite her at the back. How far is Mary from Susie? Two other children are placed at the right and left, and different names chosen.

Four boys are next seated at the four corners, the name

of each being given as he is placed. How many boys? How many girls? Where do the boys sit? How far is Charlie from Richard? *Show me where he is. Tell me where his place is. Who sits opposite him? At what corner is he? And so on until the class is able to name and locate the different people at the table in regular order, thus making a little memory exercise.*

But what shall we have on the table? Very tiny, round plates are placed for each guest, and as the *pièce de résistance*, a square mould of ice-cream is placed in the middle of the table, round plates, holding cake, etc., are placed at the front, back, right, and left of this dish, and the table will hold no more. When pictures have been made of the table and its surrounding company, the busy little workers are ready to play some of the games which Mary played at her party. •

SEAT OCCUPATIONS.

BY ANNA A. KIMBER,
Superintendent Model School, Indiana, Pa.

Part III.

A NUMBER of objects or pictures of objects may be arranged on the teacher's desk. The children, having made a list of the objects which they have learned during a week or month, may write on slates or paper what ones they see, what ones they do not see, and make simple suggested statements regarding them.

Words may be substituted for figures in number work.

As large a list as possible of names of objects in the room beginning with a certain letter may be written. This exercise may be made more difficult by asking the children to make lists of objects seen in some one room

at home, or observed in coming to school. Even an adult, if he has never seen the experiment tried will be astonished to find how much there is to be seen and how little most of us accurately and definitely see.

Lists of words containing a given sound may be made.

Objects may be located, using words expressive of form, place, and color, which have been previously learned.

Number work may be changed from words to pictures and the reverse.

Various problems may be copied, explained, and illustrated.

The children may write stories from pictures, thus cultivating the imagination and the power of expression.

They may write the descriptions of pictures. Copy and fill in elliptical sentences, whose blanks demand the use of words previously learned.

They may illustrate the different parts of a story previously told by the teacher or read in class.

The names of the seasons may be written with simple characteristics of each.

Fruits and familiar objects may be classified with reference to their general form. Animals with reference to habits and natural objects with reference to color.

Observations on plants and animals may be written and comparisons made.

But I might continue this work indefinitely for the field is almost limitless. Seat occupation is not a thing to be hedged in by narrow rules. It is not a thing so planned as to warp or cramp either teacher or child.

It requires time, patience, thought, devotion, ability. Its cost in money is little. Its resources are within the reach of all. Its results are more than can be told.



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Among them will be the skillful hand, the ready eye, and strong shoulder. For the child mental, working naturally, in no sense crowded or goaded, will build up in Nature's good time and way, the grand and noble child physical. Among the results will also be judgment, observation, discrimination, and taste. We shall find moral traits growing up in beauty too, honesty, truthfulness, industry, obedience, self-confidence, and self-respect. And is it too much to say this,—That the pupil who is trained to honesty of eye and hand, to exactness and definiteness in what he does, will be honest in heart and purpose and exact and truthful in his words? Then in these days of trouble, let us teach the rudiments of labor. Let us teach honesty and the lessons of ready-handed equality.

FROEBEL'S PRINCIPLES AND THEIR PRACTICAL APPLICATION.

BY FLORENCE CLAP, BALTIMORE.

ANOTHER occupation by which the child outwardly expresses its inward perception is through form. It is asked to string circular pieces of glazed paper of the six different colors. This is a new study in a round object. Here is something that represents a ball without possessing its solid form. It is asked to find the centre through which it places its needle; it adds a straw. Here again is the contrast of straight, with round.

Again the ball or circular representation is a concrete form. The point is the perfection of the abstract. The child in this simple occupation of stringing these pieces of paper and straws, thus fulfils one of Froebel's principles, namely, that it must proceed from the concrete to the abstract. Again a steel ring is shown and here is a symbol of the ball, and this can properly be designated as a first appeal to imagination and ideality, the child being unconscious of the mission of its play-fellow. Though the mysterious law of connection will be hidden from him, the seed will be sown for its future growth.

The traditional grim names of addition, subtraction, multiplication and division, never are heard within the sunny realms of kindergarten, but in its earnest play, the children will add their bright beads on their strings, will divide a number of their favorite balls with their playmates; will see their own balls and beads diminished, and the first steps toward the stern facts of arithmetic will be merrily taken.

Therefore we find that Froebel's first gift of six soft balls of different colors, opens to the child the possibilities of form, color, movement, number, and language, and let me say that my few suggestions must serve only as illustrations, and not by any means as an exhaustive statement. The trained kindergartner possesses in this first gift a mine of riches, and as she moves her ball up and down, to and fro, or places it in the tiny hands that make a nest to receive it, and transfigures it to a bird, she is slowly opening the door that leads to all knowledge.

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Prudence.—Dost thou remember, Caleb, what day this is?

Caleb.—Yes, truly, but perhaps it is not that to which thou referrest.

Prudence.—Wast thinking of our brother John G. Whittier, blessed of the Lord, whose birth occurred eighty years ago to-day.

Caleb.—Those were my thoughts also, Prudence.

Prudence.—(After a few moments' silence.) Our little friends promised to be with us to-day. Thinkest thou it strange they have not come?

Caleb.—The younger folks love the waning of the day. There is yet time.

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Prudence. Even so. (A short pause and a knock at the door.) Ah! who comes now. (Rising and going to the door admits five young girls and two boys.) Good evening to thee, my young friends. Walk in and take seats. (After a moment's silence.) It please me well to see thee all tonight. What good can be done for thee?

First Girl.—We have been reading some of the good words written by the poet Whittier, and have come to talk with you about him, because you are a Quaker too, and we thought you would have something to tell us about this Quaker poet.

Prudence.—Well, well, didst thou ever! So you are interested in friend Whittier?

First Girl.—Yes'm: It is his eightieth birthday, isn't it, grandma?

Prudence.—Yes, your grandfather, over there, used to go to the same school with him.

All together.—Oh! did he truly? Please tell us about him. (All draw their chairs around her.)

Prudence.—(Taking out her knitting and adjusting her cap.) Well, dears, don't all talk at once and grandma will try. (Caleb moves his chair over near the group. She pauses to think.) His parents were Quaker people and lived at Haverhill, Mass. The first of his family to come to this country was Thomas Whittier, born in 1620, and who sailed from Southampton, England, for Boston, arriving, April 24th, 1638. John descended from the same line as Daniel Webster, William Pitt, Caleb Cushing, and other prominent Americans. His home was some distance from the village, and possessed every element of an ideal country homestead. His father was forty-seven years old when he was born. He was a kind and just man, but of few words. His parents were so poor that the children were all obliged to work; this gave John very little time for school in a year.

Second Girl.—Why, I don't see how he ever learned anything.

Third Girl.—Did he long for learning very much as Lincoln and Garfield did?

Prudence.—Yes, he did, and this very eagerness to learn was what helped him most.

First Boy.—Did he write as well as study all the time?

Prudence.—Yes, he wrote when he was only sixteen, and always afterward when he could spare time.

Fourth Girl.—But I don't see as any wonderful things happened to him to write about.

Prudence.—No, dear, it isn't wonderful things he writes about. It is a way he has of showing the beautiful of common things in every-day life. He wrote a poem about his old home and childhood.

Fifth Girl.—Oh! I know, it was "Snow Bound," wasn't it?

Prudence.—Yes, dear, you must read it sometime, every one admires it. It was this poem that caused John to be acknowledged one of the most famous of modern poets, and probably the best beloved.

First Girl.—It is in that story he says:

"Shut in from all the world without,
We sat the clean-winged hearth about;
Content to let the North wind roar,
In baffled rage at pane and door.
What matters how the night behaved,
What matters how the North wind raved,
Blow high, blow low, not all its snow
Could quench our hearth fire's ruddy glow."

First Boy.—Oh! I have felt such winds and seen the snow fly like that ever so many times.

Third Girl.—Oh! you have not told us about his schoolhouse.

Prudence.—Why, yes, that was forgotten, (sits back as if thinking, laughs softly,) Caleb, canst thou not tell about it? There was there.

Caleb.—Yes, verily, children, thou wouldst not think much of going to school in such a place; a low-roofed, rude little house with narrow windows and doors and a wide chimney. A board fastened to the wall all around and a bench with no back. All the pupils' backs turned to the centre of the room. It had no fence in front, and back of it were the woods where the children gathered nuts and flowers.

Fourth Girl.—How I should liked to have seen it! (A knock at the door and the expected guests, five little Quaker girls enter.)

First Little Quaker Girl.—O grandma! Do you know this is Whittier's birthday?

Second Little Quaker Girl.—I wanted to come over and read you one of his poems from the "Voices of Freedom" called the "Yankee Girl."

Prudence.—Thee may.

Second Little Quaker Girl.—(Reads *Yankee Girl*.)

Third Little Quaker Girl.—I came over to read you a description of his home with his mother and two sisters, which I found in this book to-day.

Prudence.—Thee may.

Third Little Quaker Girl.—(Reads a description of his later home at Danvers.)

Fourth Little Quaker Girl.—Grandma, did you ever hear the piece "Maud Muller"?

Prudence.—Yes, my dear, and I always love to hear it.

Fourth Little Quaker Girl.—(Reads *Maud Muller*.)

Fifth Little Quaker Girl.—May I recite my favorite poem? (Reads "Pumpkin.")

(A knock at the door and the letter carrier announces mail for Grandma Prudence. Third little girl runs for it and hands to grandma, who opens the letters.)

Prudence.—Alice, thee may read this letter for the benefit of all.

Third Little Girl.—(Reads)

Boston, Mass., Dec. 17, 1887.

To my dear little friends:

I am so glad to hear of your proposed visit to Grandma Prudence on Whittier's Birthday and wish I could be with you, but I send you my story which is about Mr. Whittier when he was a boy. His father had subscribed for the *Free Press*, published by Garrison, one of the leaders in the Antislavery movement. It had a corner devoted to poetry with which John was much delighted. His first poem called "Deity" he sent to this paper.

One day while working in the field without coat, vest, or shoes, with only a shirt, pantaloons, and straw hat, he was summoned to the house to meet a gentleman who had called to see him. He hastened towards the house in great astonishment, his heart all in a flutter, and wondering who could call to see him. The good sister Mary, it appeared, had revealed the authorship of the poem, and the generous young editor had driven over from Newburyport to visit the young author. We can imagine how the praise affected the poet, for the manner and tones of Garrison were always hearty,

and often very tender, and conveyed an impression of sincerity. He told John his poems were very acceptable and urged that he be sent to school. Hoping you will all have a nice time to-day,

I am truly yours,

SUSIE PETERS.

Prudence.—Sarah, thee may read this one for us.

Fourth Little Girl.—(Reading)

Merrimac, Mass., Dec. 17, 1887.

My dear friends:

You know this town was formerly called West Amesbury, and that it is the place where Whittier once taught school. His father could not afford to send him to school, so he worked all one winter making slippers and shoes, to earn money enough to buy a suit of clothes and to pay for his tuition and board for six months.

At the age of nineteen, he began attending the Academy in Haverhill. It was an new institution in a new building, then occupied for the first time. Whittier wrote the ode that was sung at the dedication.

It is said when he handed in his first composition the master would not believe it was his own writing. The next winter he taught school in this place to earn money for another six months' tuition. His work was not particularly brilliant, and the pay was small, so he returned home and spent a year on the farm. Tradition does not record that he bore any resemblance to his description of his own schoolmaster, which he has described as a "Brisk wielder of the birch and rule," nor do we know whether his face was

"Fresh hued and fair where scarce appeared
The uncertain prophecy of a beard."

Give my best regards to Grandma Prudence and believe me your friend,

JEREMIAH ALLEN.

Prudence.—Rebecca, you may read this one.

Fifth Little Girl.—(Reading)

Danvers, Mass., Dec. 17, 1887.

Dear little friends:

Having heard how interested you are in Mr. Whittier, I take the liberty to write you a few lines about him. I am quite a little girl but I have seen him many times. He is very tall and thin with grey hair and beard, and has a sharp, quick way of speaking, but they say he is very kind. He has never been married and has never been out of his own country. He is still living, and I think he must be delighted to hear about all of his little friends keeping his birthday all over the United States.

This is all I can find to write, for I am a very busy little girl.

MAGGIE ZINE.

Prudence.—Maggie writes a nice letter, and speaks truly. He was sensitive, shy, reserved, and always had high ideas.

Second Little Girl.—(A knock at the door) Somebody is knocking at the door; I will go and see who it is. (Goes to the door and returning says,) Grandma, there are five barefooted boys at the door asking to come in.

Prudence.—Go, and invite them in, dear.

Second Little Girl.—(Shows the boys in, and they take position in form of a crescent upon one side of the stage.)

All the barefoot boys together.—(Remove hats and recite)

We come from the country, "friends," to hear
What you have to tell us of this poet dear.

Caleb.—"Blessings, on thee, little man,
Barefoot boy with cheek of tan."

All the barefoot boys together.—We wish to learn the way, and, then,
Do something noble when we are men.

First Little Quaker Girl.—(The five little Quaker girls take position nearly opposite the boys and in crescent form.)

In Haverhill, where the Merrimac
Moves by with gentle flow,
Was born our Quaker poet,
Near eighty years ago.

Caleb.—"From my heart I give thee joy,
I was once a barefoot boy."

Second Little Quaker Girl.—His home a low-roofed farmhouse,
Huge beamed with sanded floor;
But love and peace, good angels,
Stood ever at the door.

Caleb.—"Oh, for boyhood's painless play,
Sleep that wakes in laughing day,
Blessings on thee, barefoot boy."

First Barefoot Boy.—A poet and a farm boy? Tell;
From morning till night it is "Run to the well,"
"Go feed the chickens," or "Tend the cows,"
Or "Drive the horse while the farmer plows."

Third Little Quaker Girl.—His youth like thine, my little lad,
Was one of homely toil;
His tasks, like thine, to follow home
The kine or tend the soil.

Caleb.—"Oh, for boyhood's time of June
Crowding years in one brief moon."

Fourth Little Quaker Girl.—At night he loved to sit
In the low room quaint and old,
By the blazing fire and listen
To tales the old folks told.

Second Barefoot Boy.—Oh, tell us more about him,
More of the things he said.

Third Barefoot Boy.—How did he ever learn to write
In the quiet life he led?

Fifth Little Quaker Girl.—God taught him, child, from Nature's
Book of charms without an end.

Fourth Barefoot Boy.—God taught him! How, pray tell me,
Wise little Quaker friend?

All the Quaker Girls.—In play he wandered often
By the river's pebbly rim,
Where the waves, the birds, and the pattering leaves,
Their glad tunes sang to him.

The fair things were God's messengers,
Hark! In his verses sweet
Thee can almost hear the ripple
Of the wavelets at his feet.

Chorus or in Concert.—(By the first five little girls and boys.)

"Sing soft, sing low, our lowland river,
Under thy banks of laurel bloom
Softly and sweet as the hour besemeth,
Sing us the songs of peace and home.

"Bring us the airs of hills and forests,
The sweet aroma of birch and pine,
Give us a waft of the North wind laden
With sweet-brier odors and breath of kine.

"Sing on, bring down, O lowland river,
The joys of the hills to the waiting sea,
The wealth of the vales, the pomp of mountain,
The breath of the woodland bear with thee."

Caleb.—"Oh for festal dainties spread
Like my bowl of milk and bread,

Pewter spoon and bowl of wood,
On the door-stone gray and rude."

Prudence.—No better chance than thine, my lads,
For lectures, books, or schools,
Hear how the deeds that God counts great
Are done with farming tools.

Third Little Girl.—"Give fools their gold, and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field or trains a flower,
Or plants a tree, is more than all."

Fourth Little Girl.—"For he who blesses, most is blest;
And God and man shall own his worth,
Who toils to leave as his bequests,
An added beauty to the Earth."

Fifth Little Girl.—"And soon or late, to all that sow,
The time of harvest shall be given;
The flowers shall bloom, the fruit shall grow,
If not on earth, at least in heaven."

Second Boy.—"He wisest is, who only gives,
True to himself, the best he can;
Who drifting in the winds of praise,
The inward monitor obeys,
And with the boldness that confesses fear,
Takes in the crowded soil and lets
His conscience steer."

Caleb.—"Cheerily then, my little man,
Live and laugh as boyhood can."

All Barefoot Boys.—Who cares for the work or the shabby clothes!
We may be great men yet, who knows?

[Exit boys whistling.]

Caleb.—(As the last one goes out)
"Ah, that thou couldst know thy joy
Ere it passes, barefoot boy."

Prudence.—Wilt thou read to me the poem "Eternal Goodness"?
(Reads the poem.)
(Several young ladies of larger size enter.)

First Young Lady.—Permit us to share with you the kind re-
membrance of our favorite poet.

Prudence.—Thou art ever welcome as are all of the friends of our
brother John. What hast thou in thy hands?
(They had their books and read the poems, "Monadnock,"
"The Witch's Daughter," and "The Sisters.")

A Young Girl.—(Bringing a wreath, laurel or greens, and placing
it beneath his name or over his portrait recites),

His goodness and his greatness
His deeds and words have proved,
'Tis well to grace his stainless name
With the laurels that he loved.

CLOSING HYMN.

(Tune Beethoven, or any tune, suiting the metre.)

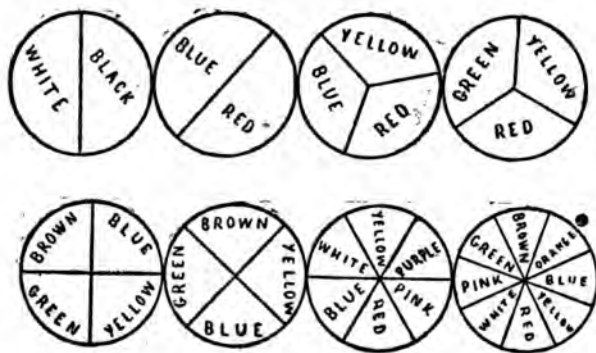
"Sing loud his praise again
All noble hearts applaud,
Him who for Nature's self has worked
For Freedom, and for God."

In Concert.—(All participants quote softly and reverently,)

"The praise, O Lord, is thine alone,
In thy own way thy work is done;
Our poor gifts at thy feet we cast,
To whom be glory first and last."

FRACTIONAL ILLUSTRATIONS.

IN one of the Boston schools, in one of the lower grammar grades, by means of colored crayon, the following device is resorted to with good effect; by having each division done first from the right-angle view, and then obliquely, there is secured variety in appearance. Varying the colors also helps in this direction.

CHIPS FROM AN EDUCATIONAL WORKSHOP
IN EUROPE.

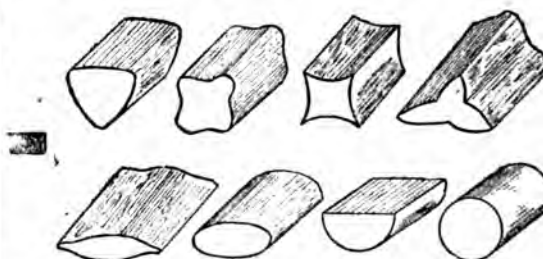
BY DR. L. R. KLEMM, OF OHIO.

Drawing in Prussian Schools.

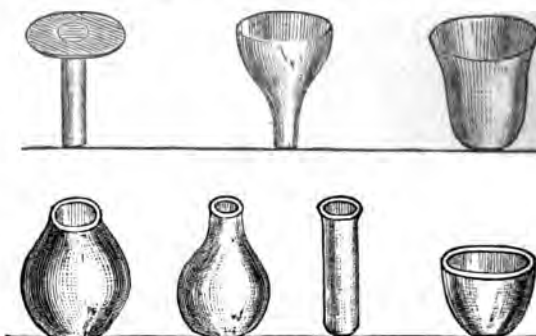
WHENEVER I had the chance of inspecting the instruction in drawing and its results, I took especial pains to inquire into the methods applied. Not often did I get the chance. Oh, yes, results, evidently touched up by the teacher, were readily shown, but rarely did I see a class in drawing in operation. It is natural, though, and according to the old proverb, "A fool who shows half-finished work." I suspect Superintendent Bright of Englewood (Chicago), Ill., sketched the truth in bold, conspicuous outlines, when he says: "The children make their drawings and we revise them. Then they draw again and we revise. Then they draw again. Then we marshal ourselves down to the superintendent of drawing and await our turns like candidates at a barber shop, in order that our re-revisions may be revised by the highest authority. Then the children take another turn at the drawing." I know that to have been the case in Cincinnati, and since the weaknesses of mankind are about the same everywhere, I could fully appreciate the European teachers' hesitancy to give drawing lessons in my presence. But a little obstinate insisting prevailed, and I can now judge upon the methods in vogue. In several cities I found the old copying process in vogue, that is, flat surfaced copies were set before the pupils, and they copied them, the work being corrected by the teacher who passed slowly through the aisles. But there is a revolution going on in the teaching of drawing in the common schools of Germany as well as America, and I trust the movement will be successful.

In several schools of Rhenish Prussia I found the old method discarded contemptuously, and drawing or sketching "from nature" substituted. It was not done heedlessly, but with a methodical skill truly admirable. I have neither time nor inclination, (the space of a book would be needed), to explain minutely the first steps taken; suffice it to say, that very simple geometrical bodies, such as cube, pyramid, cone, cylinder, sphere, etc., are placed before the class, and each child is made to draw the object *as he sees it*, which affords a great variety of views. The objects are made of different materials, some of pasteboard, many of wood painted white, a few of plaster, or even of china.

In one school, (in the province of Westphalia, east of Rhenish Prussia, where I stayed a few days with an old schoolmate of mine), I found this system of sketching "from nature" perfected to a high degree. I sketched some of the objects in the order in which they were used there for the benefit of the readers of *THE TEACHER*. These were made of wood.

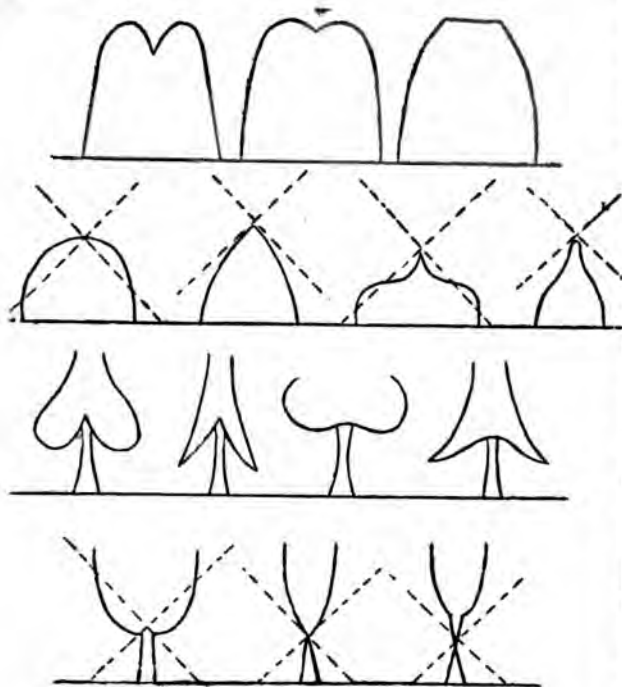


The following objects were made of milk-glass or china:



It was remarkable to see the results exhibited in portfolios and spread out for inspection. I could scarcely repress my envy, when I compared such results with the abortive endeavors of the pupils under the deadening influence of the copying system in vogue in America. In a primary school, fourth school year, the teacher had a number of leaves which he exhibited and then sketched on the blackboard, showing the differences in form and conventionalizing them as he proceeded. I was so charmed with his skillful treatment, that I sat down among the youngsters and sketched like a good little boy. I showed my work to the teacher, like the other little boys, and was gently praised for it. Oh, the fun that

caused among the children! I submit the result of the lessons. Here it is:



What a splendid preparation for the study of botany! What a beneficial awakening of the sense of form! What an opportunity for obtaining skill in the use of the utensils! I can well understand why I find such a decided opposition among German teachers against industrial schools as *special schools*. They bend all their energy upon making their common schools the best on earth and are willing, nay, eager, to adapt and adopt whatever of industrial pursuits can be adapted to and adopted in their course of study.

All branches of study which may have a practical bearing upon life, are made to reflect life. Thus not only drawing, but geography is made practical, the latter by imaginative journeys. Putty and clay are used to mold geographical formations in imitation of nature. Mensuration is made both attractive and practical by handling geometrical bodies, not only thinking of them. They are made of pasteboard, and are home-made by the pupils — another opportunity for manual occupation. Kindergarten occupations I find in almost general use in the lower grades. Of course much more advanced work done, in molding, for instance, than is done in a Kindergarten.

In composition work I find letters, notes, bills, receipts, petitions, etc., written, such as the pupils may be called upon to write after leaving school. Arithmetic is taught rationally, and the problems have bearings upon the child's every day experience. In one school a lesson in buying and selling greatly interested me. One boy was the storekeeper, and great glee was occasioned by an order he made whereby he lost a few pennies while mak-

ing change. This lesson was an object-lesson, it was a language-lesson, a lesson in arithmetic, a composition and reading lesson, it was all that and more — it was something which organically connected schoolwork with life's demands.

Among all the schools I have visited so far, and I saw some in France, some in Holland and Germany, I am ready to pronounce those of Lower Rhenish Prussia the most advanced in methods and results. But it is perhaps too soon to discriminate, having really only begun my tour. I may greatly change my opinion after having seen the famous schools of Berlin and the kingdom of Saxony.

I must not burden these letters with reflections upon political and social questions, or with impressions gained by traveling through this continent, much as I should like to, for I am here for a purpose, and these letters are written for a purpose, not to speak of the amiable editor's direct prohibition. I thought it due to myself and the readers of THE TEACHER to state this fact.

PENMANSHIP.—(IV.)*

SIXTH YEAR: Use No. 3 copy-book and exercise book. Keep up movement drill. Begin to urge them on a little. Give occasional tests of speed. Take some word as an exercise: when they are familiar with it, ask them to write as many as they can in a minute. Allow no scribbling, but expect that the letters will be more or less modified. Expect each one to do his best, and see that he does it.

Seventh year: Use No. 4 copy-book with exercise book. The ruling of the exercise should be made to correspond to the ruling in copy-book, and as the spaces in No. 4 are one tenth of an inch, the spaces in exercise book should not be wider than one ninth of an inch. The movement should be free, and frequent exercises in speed given. Exercises upon capital letters may at first be quite large, occupying four or five spaces in height, but they should be brought down to three spaces as soon as possible. Make exercises of this kind spirited. Counting is very beneficial a part of the time. Do not make the exercises tedious, but hold them down to work. Allow no scribbling. Do not shade too much, but make the shade with an elastic, springing touch, instead of a drawling scratch; it is done with a *stroke* of the pen. Imagine a pin to be driven where the heaviest part of the shade is to be; then try to knock it out with the pen, and the shade will as a rule be right. Illustrate this on the blackboard. Continuous exercises are good. Take, for example, the capital O; make five of them without lifting the pen. Notice the poor ones. Try again; mark poor ones, and so on, until a group of five can be made in which there are no poor ones. Count one, two, for downward strokes.

Then speed them; see how many groups can be made in a minute with no poor letters. Then try a word with

four or five letters, beginning with capital *O*. Never lose sight of the fact that this work, although rapid, must not be carelessly done.

Eighth year: Use No. 5 copy-book with exercise books. Continue the movement and speed-drill exercises. The fingers may be used in conjunction with the fore-arm in this grade. When the hand moves upward, let the fingers be extended; when it moves downward, let the fingers contract. When this can be perfectly done, it produces the easiest and most rapid movement known.

When pupils pass out of the A grammar into the high school, they should be able to write fifteen average words, or seventy-five letters per minute, for ten consecutive minutes, and the writing should have a free, business-like appearance, so that a boy can step from the A grammar into the counting-house,—not with a schoolboy hand, so-called, but with a business hand-writing. This result can be attained if all the teachers from No. 1 up to No. 8 understand their business and will do it. But No. 1 must have a clear idea of what is to be done in her grade, and in at least two grades above her; No. 2 must know what has been done by No. 1, and what is to be done by No. 3 and No. 4, etc. It is an endless chain, in which, if there is a poor link, some one will have to suffer, and that one may be perfectly innocent. Not only must care be exercised in the copy-book work, but all writing done in the school should be done in the same careful manner.

MODERN METHODS IN ARITHMETIC.—(IV).*

BY A. E. WINSHIP.

14. Teach with little or no use of objects or story-telling:

$$\begin{array}{ll} 9 + 2 = 11 & 7 + 4 = 11 \\ 8 + 3 = 11 & 6 + 5 = 11 \end{array}$$

These are all the combinations that we need dwell upon. If pupils have been well taught, they have brains and experience sufficient to put 3 and 8 together for 11, as readily as 8 and 3.

Teach by the use of objects and story-telling:

$$\begin{array}{ll} 2 \times 6 = 12 & \frac{1}{2} \text{ of } 12 \text{ is } 6 \\ 6 \times 2 = 12 & \frac{1}{3} \text{ of } 12 \text{ is } 4 \\ 3 \times 4 = 12 & \frac{1}{4} \text{ of } 12 \text{ is } 3 \\ 4 \times 3 = 12 & \frac{1}{6} \text{ of } 12 \text{ is } 2 \end{array}$$

Have this fixed, ineradicably fixed. Be not hasty about it. Teach by objects grouped in a variety of ways. Encourage their ingenuity in this grouping. In teaching 2 sixes (2×6), for instance, arrange thus:

$$\begin{array}{l} 1. \quad 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ 2. \quad 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ \quad \quad 0 \ 0 \ 0 \ 0 \ 0 \ 0 \end{array}$$

In teaching 6 twos (6×2), arrange thus:

$$\begin{array}{l} 1. \quad 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ 2. \quad 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ \quad \quad 0 \ 0 \ 0 \ 0 \\ \quad \quad 0 \ 0 \\ 3. \quad 0 \ 0 \quad \quad \quad 4. \quad 0 \ 0 \\ \quad \quad 0 \ 0 \quad \quad \quad 0 \ 0 \ 0 \ 0 \\ 0 \ 0 \ 0 \ 0 \quad \quad \quad 0 \ 0 \ 0 \ 0 \\ \quad \quad 0 \ 0 \quad \quad \quad 0 \ 0 \\ \quad \quad 0 \ 0 \quad \quad \quad 0 \ 0 \end{array}$$

The idea is to have the child recognize the six groups of two, in any way in which they may occur, and recognize them under all circumstances as twelve.

In teaching 4 threes, arrange thus:

$$\begin{array}{l} 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ 0 \ 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \ 0 \\ 0 \ 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \ 0 \\ 0 \ 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \quad 0 \ 0 \ 0 \ 0 \\ \quad \quad \quad 0 \ 0 \ 0 \quad \quad \quad \cdot \\ \quad \quad \quad 0 \ 0 \ 0 \\ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \\ \quad \quad \quad 0 \ 0 \ 0 \end{array}$$

This work need not be done with objects as thoroughly with any other set of combinations, for if it be once well done, the child will instinctively see a similar arrangement with the combinations in any other number.

15. Teach without objects, but with much thoroughness:

$$9 + 3 = 12 \quad 8 + 4 = 12 \quad 7 + 5 = 12$$

No other combinations in addition need be taught under 12. They already know that $10 + 2 = 12$. If they know that $9 + 3 = 12$, they know as well that $12 - 3 = 9$.

Have numbers written upon the board for addition, with a view always to accuracy and promptness, but not to rapidity.

Select the examples with a view to familiarizing them with all possible combinations.

Random examples do not give the drill needed. Practice with combinations in which no sum or product above 12.

Sample Examples:

$$\begin{array}{cccccc} 2 & 3 & 3 & 1 & 2 & 1 & 1 \\ 2 & 3 & 3 & 2 & 3 & 3 & 2 \\ 2 & 3 & 3 & 3 & 4 & 4 & 4 \\ 1 & 2 & 1 & 4 & 1 & 2 & 3 \\ \hline & & & & & & \end{array}$$

$2 \times 3, \times 2; 2 \times 2, \times 3; 2 \times 3, + 5, - 3, \text{ take } \frac{1}{2}$

16. Have measures for the use of the pupils. There is much less need of this in the country than in the city. Every primary schoolroom should be provided with a "moulding board," a table about three by four feet, or even smaller. It should have a strip about two inches high all around it, and about a peck of moulding sand.

In this the children in their first weeks can play with the little toy objects used in language lessons, making the stories more real. They can use it, also, to good advantage for measurements.

Do not, at first, allow them to speak of a pint, quart, gallon, peck, inch, foot, yard, or dozen, without seeing that quantity, amount, or number as they speak. Let not the abstract work come until they know and appreciate what it really means.

With these appliances, teach:

2 pints are 1 quart	$\frac{1}{2}$ of a quart is 1 pint
4 quarts are 1 gallon	$\frac{1}{4}$ of a gallon is 1 quart
12 inches are 1 foot	$\frac{1}{12}$ of a foot is 2 inches
	$\frac{1}{4}$ of a foot is 3 inches
	$\frac{1}{3}$ of a foot is 4 inches
	$\frac{1}{2}$ of a foot is 6 inches
8 quarts are 1 peck	$\frac{1}{8}$ of a peck is 4 quarts
	$\frac{1}{2}$ of a peck is 2 quarts
12 is 1 dozen	$\frac{1}{2}$ of a dozen is 6
	$\frac{1}{3}$ of a dozen is 4
	$\frac{1}{4}$ of a dozen is 3
	$\frac{1}{6}$ of a dozen is 2

While teaching the above facts by measurements, practice in previous combinations, and have some abstract work daily.

FLUFF.

BY IDA F. B.

HO! by the pricking of my purse
I feel approaching winter's curse.
When they auction off for fifty cents
What brought my wife to indigence.
She lets herself and home run down
(She wears her old last season's gown);
Of nothing but the Fair she speaks;
We've scarcely seen her for three weeks;
And after all this fuss, I ween
Church makes ten dollars, I lose nineteen.

A sure sign—Over a blacksmith's.

It is a cold day for the paragrapher when he has given away all his friends' idiosyncrasies.

No one has such *abiding* faith as an unwelcome guest.

Judging from the newspaper accounts of prima donnas' exactions managers are justified in calling them all bright, *particular* stars.

The difference between the popular young man and the popular young lady seems to be that one has to pay to be popular and the other finds that being popular pays.

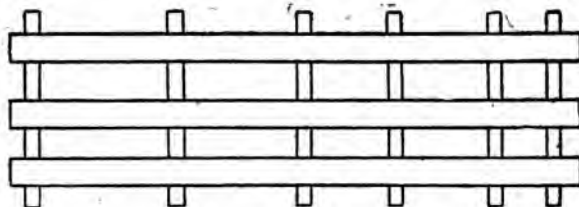
"Did he say it in derision?" asked a lawyer of a witness who answered, "No, he said it in New York."

The small boy finds it easier to arouse his parents than their enthusiasm Fourth of July morning. This may be called an unreasonable joke.

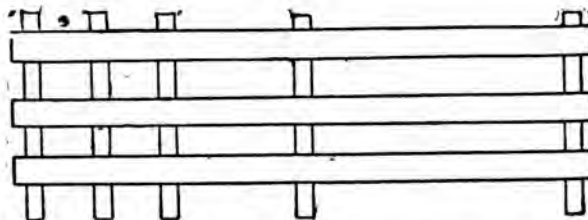
FOUR WAYS.

BY A. E. W.

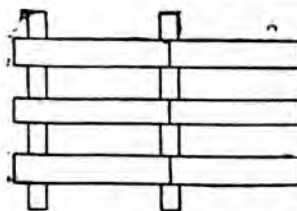
THE teacher who leads children to think, and think how to do a thing in the best way, and why he does it in a given way, is doing for him more than by teaching many facts. We were impressed with this thought by an exercise in one of the Boston schools. In arithmetic the class had an example which each pupil illustrated by lining a fence. Most of them did it in this way,—drawing the three rails in mid air and then putting on one post at a time.



Some put up the three rails as before, and then put a post at either end, then one in the middle, then one midway between the first and second, then one midway between the first and the nearest post. In this way greater accuracy was secured.

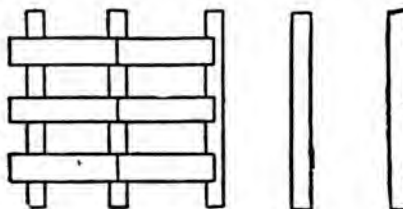


Some started to build the fence one section at a time, by putting up a post, then three rails, then the second



post, then three rails, etc.; but this left the ends of the rails in mid air.

One boy put up his posts and then put in his rails.



The success of such teaching is worth a deal of what sometimes passes for modern methods, but leaves no play for real thought and for stimulating ingenuity



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No. 6.

LONGFELLOW.

[On his Birthday, February 27, 1888.]

BY MRS. WM. RICHARDSON, SEDALIA, MO.

O Poësy!
He who could best interpret thee,—
Whose verse inspires
Most chaste desires,—
That bard is dead!
Oh! crown'd head,—
Where clustered bays
Were laid, our praise
To show,—
Thou liest low!

Poet beloved!
To honor thee are thousands moved!
They hail with mirth
Thy day of birth.
Yet 'tis most meet
That we should greet
With songs of thine,
Almost divine,
Its hours,
For thou wert *ours*!

We think of thee
As clothed with immortality!
Where cherubim
And seraphim
Wake harmony,
And melody,
If never *here*,
Forever there
Through grace,
Hast thou a place!

No syllable
From that vast "choir invisible"
Can penetrate
Our low estate;
Nor echo float
To earth a note
Of heav'nly strain
Thou sing'st again,
Above,
Where all is love!

— O'er wayward childhood wouldst thou hold firm rule
And sun thee in the light of happy faces;
Love, Hope, and Patience,—these must be thy graces,
And in thine own heart let them first keep school.

— Coleridge.

THE MISSION OF MANUAL TRAINING.

BY N. A. CALKINS,

Assistant Superintendent of New York City.

THE public schools have no right to educate their pupils in one direction only, and leave them poorly fitted to pursue the common vocations of life. If the schools have no right to use manual training in preparing the pupils for the common duties of life, what right have they to use such subjects of instruction as tend chiefly toward a professional vocation? The true business of the public schools is to furnish such an education as will prepare the pupils to learn everything for which they have a natural aptitude and to supply opportunities for developing the tendencies of these God-given aptitudes; then they may find their proper pursuits for life.

Special technical schools and trade schools have their own spheres and purpose in education; but these lie outside of and beyond the public school. Theirs is a supplementary work, somewhat akin to that of the schools for the professions and for business.

While I plead in behalf of manual training, I do not underrate the necessity of intellectual training, nor the value of moral culture. These are indispensable; they lie at the very foundation of all true education. I would not have the manual training take the place of that which is essentially valuable in our present course; but I would have its characteristic features of teaching take their proper place in the methods of teaching many of the present subjects. In the primary schools, some of the kindergarten exercises may be profitably employed, such as paper-folding, stick-laying, clay-modeling; and to these may be added proper methods of object-teaching, combining lessons on *form* with *drawing*, paper-folding, cutting, making, etc., so as to give special training for the sense of touch, in handling, drawing, molding, making, designing. All this would result in better teaching and a clearer understanding of the subjects used as a means of training the mind through the hand.

The processes of teaching writing, arithmetic, geography, should be made to conform, as far as practicable, to those of manual training. The free-hand drawing of the primary schools will lead to mechanical and decorative drawing in the grammar schools; the instruction in *form* in the primary grades will prepare for graphic methods of treating geometrical problems in the grammar schools. The clay-modeling of the primary classes will lead to the

construction of relief maps for the geography of higher grades. The making in the primary work will prepare for constructing illustrations of the mechanical powers in advanced classes. The provision for the use of common tools in a workshop, by the pupils of the higher grades, will add further mental development and give greater dexterity and skill in hand-work. The sewing of the primary grades may be extended to making, cutting, fitting, etc., for girls, with matters pertaining to domestic economy added. All the manual work may be duly associated with, and made a part of, the teaching of the kindred subjects in the ordinary course.

Such manual training lessons, whether in form, clay modeling, free-hand drawing, paper-cutting, making, mechanical drawing, graphic methods of teaching, illustrative construction, designing, the use of tools, sewing, fitting, etc., are practical *object lessons*, and have a legitimate place in our public schools. They provide exercises for training the sight in accuracy of perception, the touch in a nicety of manipulation. All of these lessons lead to habits of order and definiteness of knowledge of whatever may come under future consideration.

TRUE OBJECTIVE TEACHING.

BY JANE E. GORMLEY, COMINS SCHOOL, BOSTON.

ON the line of objective teaching much has been said and much has been done, yet a few thoughts upon a certain phase of the subject may be appreciated.

I have always found that the principal condition of knowledge was the presence of the object; in fact, that no true elementary knowledge could be acquired without the presence of the object. It was only when a child had gained sufficient particular knowledge through elementary teaching that general knowledge could be given or scientific teaching begin.

A short time ago I heard a teacher speak of his visit to Harvard College. He there found the students dealing with objects and acquiring knowledge from that standpoint. He criticised this method with college students on the grounds that the object of a college was for scientific training, and that general knowledge was the only means by which it could be secured; moreover, that the particular knowledge gained from the immediate presence of the object was detrimental to scientific training.

General knowledge owes its existence to particular knowledge, and particular knowledge is only acquired through the presence of the object. It is therefore evident that the objective method should be used in the earliest stages of education, when the mind is best adapted to receive it, and not postponed until the pupil enters upon a scientific course.

At present we find objective teaching carried out largely in high schools, normal schools, and even colleges, for the simple reason that the minds of the students have not yet

gathered sufficient material from which to generalize. On the other hand we find much of the work in grammar, and even primary schools, carried out by means of a scientific method of teaching. This is contrary to the natural order of things.

Although no dividing line can exactly be given, this is established: That before a scientific study can be entered upon, a sufficient amount of objective knowledge must first be obtained. It is, therefore, safe to add that too much objective teaching cannot be done with beginners in the great work of education.

In presenting an object to a class, the whole object should be studied and thoroughly pictured in the mind before any of its parts. Children should be trained to observe, first, the whole, then the parts. If this method is not carefully carried out, clear mental pictures will not be obtained.

When the whole is fixed, the parts should be observed in their natural order, in the order which they occur in nature. This mode of observation lays the foundation for systematical thinking, and this mode of thinking is of more value than the amount of matter taught.

Suppose a lesson to be given on the peach. The object is to be present and studied as a whole,—size, form, color, etc. Then the parts as they occur in nature,—skin, pulp, stone, kernel. When the parts are fixed, the qualities of the parts should be observed,—elasticity and downy appearance of skin, various qualities of pulp, hardness and peculiar formation of shell, formation and qualities of kernel. Lastly, the uses of these parts should be taught,—skin as a protection to pulp, pulp as food, shell as a protection to kernel, kernel to produce new plant.

The object of these lessons is to lead children to think naturally and logically and to express their thoughts in the same natural, logical way. This mode of thinking and speaking makes unnecessary the method of learning by heart and exalts the position of the definition. A definition is a description of a mental picture; when there is no mental picture there can be no description.

It also furnishes the mind with a supply of elementary knowledge which will form a basis for scientific knowledge later on in life; it stimulates the mind to a close observation of the things with which it comes in contact; and above all, lays the foundation for a systematical method of thinking which will react its influence upon every branch of study. It is not enough for pupils to think and speak logically; their thoughts must be fixed by writing. Fix thought is the basis for further thought. If the thought is not fixed there is very little development.

Written expression should be developed according to the plan of objective teaching. The story or subject to be written upon is the whole; the thoughts embodied in the story or subject are the parts. These parts naturally occur in logical arrangement and should be written in the same systematical way. In order to carry this out successfully, a unit must be taken to express a part; the

unit is the sentence. This is the first and most important step in written expression. It is a waste of time to keep children writing upon any subject whatever, if they do not express their thoughts in clearly cut sentences.

This work is most elementary in its nature, so should have its origin in the lowest grades of the primary school. From the moment a child is able to write anything, he should be required to write it in a sentence.

THE ART OF BEING PLEASANT.

BY A. N. EVERETT.

I HAD almost decided to slip in an adjective and call it a rare art, for just stop and think for a moment how many of your acquaintances you can find who habitually cultivate it. How many men and women and above all how many children are daily learning what a charmingly useful art this is, and how necessary it is that we should all devote our attention to acquiring it? And, since it is so good for us to know, how necessary also is it that we should begin early to learn the rudiments!

Now, as everything that we attempt to teach in our schools is sure to prove a success sooner or later, why not let us give a little time and attention to introducing this art in its simplest form? And, as we all know that teaching by example is of far more avail than by precept, of course the work begins,—as all work in the school-room does,—with the teacher, and as La Fontaine says in one of his fables, "It is of no use running: to set out betimes is the main point." Of course again, the work begins with the lower grades, with the youngest children.

The brightest, happiest, and most wide-awake school I ever saw was governed by a thoroughly pleasant woman. She was sunny-tempered; she was not, as some people think, a pleasant person must necessarily be, easy-going, careless, and unmindful of her stern duties, but she was as gentle-mannered and sweetly courteous to the small mites under her care as to their elders, and she taught them the simple rules of forbearance, patience, and politeness that are the rudiments of my fine art. Children will be rough and rude to one another, the petted darlings of luxury as well as the untutored nurslings of poverty. When this woman first gathered the reins of government into her small hands, scenes like these were of constant occurrence: Up flies a hand,—"Teacher, Tom Rogers hit my elbow!" or, "I say, that new girl knocked my pencil off my desk," accompanied by a scowl of defiance; or, "Sarah Thompson's taken my book, and won't give it back!" or, "The boy back of me pulled my hair!" Trivial things all of them, but rude and thoroughly unpleasant.

This teacher did not think it lost time to take a few minutes directly to explain the rudeness of such acts,—to explain, not merely to reprove for it. She made plain the nature of their faults to Tom, Sarah, the new girl, or

"the boy behind me," and, at the same time, taught the assaulted boy or girl that he or she had been equally uncivil in the manner of taking the affront. She taught them civility to one another and its influence was soon apparent in the schoolroom. This woman was uniformly even-tempered; when she gave reproof she was sweetly serious, often grieved, and sometimes angry, but she was never violent in speech or act. In a word she was pleasant, and she had the greatest number of pleasant children that I ever saw in one room.

There was no perceptible government in the school, courtesy, and that of the genial, kindly sort, was the governing principle. The children learned to respect each other, the teacher, themselves; their dispositions were sweetened, they were happier, brighter, nobler. A little boy, who came to this room from a school under very different management, amused and gladdened his home people by saying, "Now, mamma, I know for the first time what it means to be glad to go to school; I've got such a pretty teacher." She was not a pretty woman, she was only pleasant; she made it a study to cultivate the art of being pleasant; this stood for beauty to his childish eyes.

When the children were sulky and disagreeable under reproof, when obliged to make up wasted time, or on any of the many occasions which hourly present themselves, when pupils find it perfectly easy to be unpleasant, her own patience and gentleness helped teach them the lesson of forbearance. She had pleasant words to give away, pleasant smiles to scatter about, and she taught the lessons of helpfulness and cheerfulness. Children are good mimics. Try teaching them the rudiments of this finest of fine arts, and all the time you will be perfecting yourself in it, as the musician's touch strengthens with every hour's practice, as the artist's brush grows finer and truer with every stroke on the canvas.

TEACHING SPELLING.

BY ELLA M. HERSEY, FRANKLIN FALLS, N. H.

CHILDREN from 7 to 9 years of age are very fond of working together, so I write a list of words on the blackboard, and when the older pupils are having recess, and the noise of the playground prevents individual work, they spell and pronounce these words in concert. I pronounce and they spell each word several times according to the following plan: First they spell the words "out loud" together, then they whisper the letters and pronounce the words in a whisper. They think it rare fun to shut their eyes and lips and spell the words to themselves,—then they enjoy reciting them in the air as though they were writing on the board, then they write them on their slates. After this they use each word in a sentence, first orally, then in writing. When the sentences are written, I call on some child to

read each sentence; tell how to begin and end it, and spell each word, the other pupils correcting their slates while he reads.

When they have learned a good list of words, they like to write a story that will bring them all in. To illustrate, I will read a *part* of the story they wrote, after learning to spell the names of the parts of the body: Robert is a little boy eight years old. He has very light hair, blue eyes, pink and white skin, a smiling mouth, a short nose, large ears, a thick neck, square shoulders, short arms, pretty hands, short legs, and small feet. His forehead is low, his cheeks are plump, his tongue and teeth are in his mouth. His wrist is on the chair. Do you think he ever had the stomach-ache? We can count his knuckles and finger-joints. He puts his right hand on his knee. We hope he will not sprain his ankle. If he wears small shoes, they will hurt his toe-joints. Now, his elbow is on the desk. If he takes cold he may have a sore throat.

As a final exercise I let them copy the words, and take them home to spell to their parents, who are sometimes *astonished* to find that their children can spell so many hard words. I was very much amused, when one of my little boys told me that his mother said, "She was afraid he would be sick before the end of the term; because he had learned to spell so many words." From other mothers I received more encouragement, and more rational criticism. We study words after this fashion, till the children can write or spell them orally; then we give some new ones. In this way the children learn to spell the names of objects in the schoolroom, of the parts of the body, of articles of clothing, of things they can buy at the store, etc. I *insist* upon having each child sit in good position, look at, and speak each letter as I point to it. I find this way of studying helps their pronunciation. It teaches the letters to those who do not know them, and it also teaches them how to study. As they consider the exercise nothing but play, it is so much clear gain.

Word-building helps them, also. Let them make out lists of words that sound alike, as arm, harm, farm, lank, bank, rank, etc. They like to make lists of words that have the same letter or letters silent in them, as *e*, in mite, late, etc., *gh*, in light, right, might, etc. Let them think of words that contain two or more letters, having the sound of one only—as eight, *ei* having the sound of long *a*; sew, *ew* having the sound of long *o*. They enjoy gymnastic exercises in connection with the spelling and pronouncing of long words.

The old-fashioned way of spelling orally and "*taking places*," is *not* played out yet, it helps keep up the interest. I let my scholars "*spell down*," once or twice in a term. I inform them what class words I shall give them to spell and encourage them to study.

The children in one of my classes, annoyed me very much by *thinking* they could spell their lesson before

they *could*. I told them to study till they could write the *whole* lesson, without *looking* at the words, then, *look* and *see* if the words were written correctly, if they were, they might go to the board and write them. They enjoyed it very much and made *marked improvement*.

Allow them to copy stories from their readers; write sentences on the board with dashes in place of words omitted, and a list of the words necessary to complete the sentences. Then let them *select* from the list of words and copy the sentences in proper order.

FUN IN SCHOOL.

BY WAUMBECK.

YEARS and years ago I remember being severely reprimanded by a stern teacher for eating a clove in school, while my neighbor Sydney was flogged for dropping an apple out of his pocket upon the floor, and Lopez, for eating an innocent peanut, had to stand on the platform and eat twenty of these peanuts, shells and all.

How the world changes! During this present week before Christmas, 1887, I have heard of the following "carrying on" in various schools in and about Boston. The time for them all was the last half day, and the influence in a certain direction so healthful I hope this particular kind of disorder, confined to the last half day of the term, will increase.

School A, primary room, visited a private kindergarten near by and saw the beautiful Christmas presents made by and for the little ones, and listened to some of the exercises.

School B, also primary, had a Christmas party, at which games were played, the best game of all being "Playing School," wherein different pupils became teacher in turn. Then came the lunch of figs, candy, apples, and pop-corn.

School C, a kindergarten, opened the schoolroom to friends and parents who came in large numbers to see the pretty Christmas presents made by these little nimble fingers.

In School D, grammar grade, every room had some Christmas festivities. In three rooms were Christmas trees, and the graduating class, acting through a committee of ten from their own number, prepared a fine program of appropriate exercises, to which they invited the teachers.

In room E, lowest grammar grade, the teacher had first singing, then reciting "Ifs" and mottoes; then a dialogue, then writing a short letter to the principal, wishing him "A Merry Christmas." After this four pupils were appointed letter-carriers, and the mail, previously prepared, was distributed and the letters opened and read by the excited boys. Poor Jones,—alone out of fifty-six,—didn't receive a letter from some other pupil. How disappointed the little fellow was till comforted by two bags of candy instead of one, given by his ready-witted teacher. Ten

pounds of candy, eaten in twenty minutes, completed the program.

In room F, third-year grammar, the principal was invited in to see the Christmas presents which the class had made and just completed under the direction of Miss J., the sewing teacher. They consisted of handkerchief bags, pin-cushions, shaving-paper cases, splashes, lamp shades, etc., many of them worked with remarkable skill and in good taste as to color, shape, and design.

In room G the teacher exhibited to the little girls a comical black doll, which created roars of laughter.

Such fun helps the children to associate something pleasant with the schoolroom, and to love the place instead of hating it. Then children will study harder and behave better next term for this short season of fun.

A LETTER.

BY M. T. P.

BELIEVE in letter-writing, and in my classes, every year, there are many letters written,—social, business, friendly, etc., and these are the chief means of using written language. So-called essays on Friendship, Truth, Education, Mary Queen of Scots, Old Age, etc., are eschewed, and only such topics are chosen and such means employed as will serve a practical purpose. One of the most ambitious subjects and one hardly justifiable by my tenets in this matter, is the writing of a letter to a young man about going into business, the writer offering or endeavoring to offer some needful and wholesome advice. These letters are always interesting because they are the outspoken expression of what the writers think and feel, and they often give the key to the writer's character. The following letter, which I take the liberty to copy, was written by a lad of twelve years of age, and contains advice many an older head might have failed to furnish:

BOSTON, MASS., January, 1888.

Dear Sir:—Hearing that you were about to enter into business, and knowing that a little advice will not come amiss, I take pleasure in sending to you this letter, hoping that you will profit by it. Always be truthful, because then you will be believed. A man that is not truthful is not believed even when he does tell the truth. Ever be honest because then you will be trusted. A dishonest man is not trusted, and no person is willing to place him in a responsible position. Be industrious and you will make money. A man that is not industrious is always poor. Persevere and you will be successful. Those who do not persevere are the ones that do not succeed. Be temperate and you will save your money. But wait, I have been using words unnecessarily, and then, too, I have more to say than this piece of paper will hold. There are two simple words that will completely express my advice. They are these: "Be manly." Manliness is a virtue which not everybody possesses. We have had in our own country some of the best examples of manliness the world has produced. Look at George Washington. What man ever had a more manly spirit than he? What man was ever more beloved and respected than he? Look also at Abraham Lincoln and Benjamin Franklin, and many others. Were not they all loved and respected? And why? Because they were manly.

Now, therefore, be yourself manly, and I have no doubt but that you will prosper in life. Your true friend, J. E. H.

METHODS FOR THE SCHOOLROOM.

SIGHT-READING.*

BY MARY I. LOVEJOY, CHELSEA.

IT is not difficult to preserve and maintain the earnestness and naturalness of childhood expression in all reading, from the outset. Through the use of toys and objects the children are influenced to talk with ease and freedom before commencing to read. Blackboard exercises, preliminary to the use of books, are important and are now in general practice; twenty weeks are none too many for this work, exclusively.

A vocabulary of two to three hundred words should be learned in this time so as to be recognized in easy sentences. Script representations are preferable to print because more easily and quickly written. No child should be allowed to read indifferently at any time, *never* to hesitate, nor fail to give the right expression. The teacher should not read for her pupils to imitate. The pointer, moving beneath the sentence without stopping, is an important aid in breaking up hesitancy, at first. The division of a school into sections or groups of ten or twelve children each insures better instruction and affords better opportunity for special attention to dull scholars.

Variety in the manner of conducting the recitation is desirable. Pupils should not be called in turn to read, as it prevents constant expectancy which is the life of a recitation. Pupils should not be called to read until the paragraph has been read in silence, nor before manifesting a readiness, by raising the hand. Every one should have a chance to read at each recitation. No exercise should be more than fifteen minutes in duration.

The ordinary reading books are not properly graded for being read through in course. Selections should be made from many books,—ten to fifteen different sets. By spending time upon easy reading the pupils will the sooner be able to read that which is more difficult and with greater intelligence. Reading-books should not be kept by the pupils until completed in the class. No preparation is necessary before being called to a class exercise. Application then becomes most intense and the expression most earnest. The lessons should rarely be read more than once in the class. The books should be placed in the hands of pupils for busy work when thus completed. Picture-books with properly graded reading are excellent for busy work.

Before a lesson is read, write the new or difficult words on the blackboard and have them spelled orally. It is a good plan to require sentences showing the right definition or use. The first half of any First Reader is suitable for the first year. Second half of same with first half of any Second Reader graded properly for second year. Second half of same with one or more easy Third Readers is

* Selections from abstract of paper read at Massachusetts Teachers' Association.

adapted to third year. It is a good plan for pupils to look off the book when reading short sentences; it prevents an attempt to read before grasping the whole sentence; it strengthens memory and expands the mental grasp. To require the pupils to grasp the sense in advance of utterance is an important principle in teaching reading.

The undivided attention of the pupils is to be directed to expressing the sense of what is read, avoiding whatever tends to divert it, such as correcting a pupil while reading, allowing the class to watch for mistakes in pronunciation, phonic drill, etc. Corrections should be made unobtrusively after the pupil has read. The eye should be trained rather than the voice, or sense of sound. The earnestness developed will cultivate the voice; recognition by aid of the eye is quicker and surer than that of sound. Phonics should not be ignored; they are excellent in their proper place, which is not when giving expression to ideas as represented in a reading lesson. Every exercise should be conducted in a lively, brisk manner. Teach children to *work with all their might, at short intervals, then engage with lighter exercises.*

NO ORAL READING LESSONS.—From 10 to 13.

BY A. E. W.

THE oral reading lesson "must go." It takes too much time; has too little to show for the time given to it; forms bad habits of reading, and must eventually give place to other methods. Changes take time, and we are patient, but the oral reading lesson is not always to monopolize so much time as at present. There are several definite things that must be taught before there is any time to consider the omission of oral reading lessons. These things can be, and in many schools are now taught within the first four years of the child's school life.

The child must be so taught that he will know

Words at sight.

Their meaning at sight.

How to pronounce clearly and correctly.

How to give effective inflection.

How to emphasize discriminatingly.

How to run the eye ahead of the voice.

How to look off the page while reading.

When this skill is attained, — when the child has acquired all of these powers with eye and voice, — attention needs to be given at once, systematically and skillfully, to *thought reading*. The great majority of the reading in this life is silent reading. Not one pupil in fifty will, as a man or woman, read aloud one day in fifty. What they want in life is the ability to enjoy and profit by "reading to themselves." To this end, in the years following those spoken of above, or the fifth, sixth, seventh, and possibly the eighth of school life they need to be taught as skillfully to read silently, and get the thought as they read.

This requires attention to many things, —

The habit of knowing what a word is when read silently as well as when read orally.

The picture the child gets of what he reads silently.

His discrimination between the important and unimportant thoughts.

His discrimination in silent reading between the attention to be given to

Descriptive.

Narrative.

Poetic.

Sentimental.

Philosophical.

Didactic.

Argumentative, etc.

In these thought lessons in reading there should be carefully selected material. Hap-hazard supplementary reading is one of the abominations of "modern methods." To read anything that comes along, from any source, upon any subject, must soon bring supplementary reading into disgrace. It must be systematized with a view to teaching pupils from 10 to 13 how to read for the best thought all classes of reading.

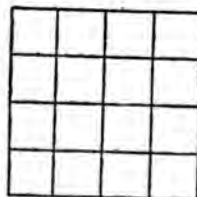
From thirteen or fourteen onward there should be vocal lessons, with a view to the greatest helpfulness to the youth in effective conversation and public address, for in this age of the world, in this land of ours, both men and women have a right to demand that they have the ability and confidence to say effectively whatever they desire to say whenever they have occasion, but this has to do with higher grades than those to whom THE AMERICAN TEACHER speaks.

CHIPS FROM EDUCATIONAL WORKSHOPS IN EUROPE.

BY DR. L. R. KLEMM, OF OHIO.

A Primary Lesson in Mensuration.

IN one of the largest cities on the middle Rhine I was deeply impressed with the excellent work done in the schools. Nowhere had I seen such harmony between the different teachers and schools. Comparisons are odious; but from the bottom of my heart I wished to have friend B. (my eternal opponent in the discussion of modern methods of teaching, and withal my dearest friend) with me, to show him the results of rational application of the developing method. Among the lessons I heard was one in *measuring*. The pupils could not have been older than eleven or twelve years on an average. I will endeavor to sketch the lesson from notes taken on the spot.



The teacher drew a square on the blackboard and divided it into four equal strips; then the strips into four equal parts each, as in the margin.

During the entire lesson the pupils drew on their slates the same figures which they saw their teacher draw

Teacher—How many of these little squares are there in one row? *Pupil*—There are four of them in one row.

T.—The pupils always answered in complete sentences; but for brevity's sake I will not repeat their complete answers. The lesson was one in drawing, arithmetic, and language.

T.—How many of such rows? *P.*—Four.

T.—Have they all the same number of little squares? *P.*—Yes.

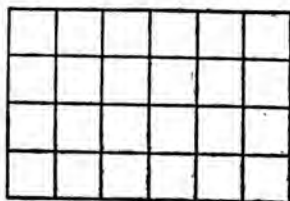
T.—Then if there are four in one row, and there being four of such rows, how many must there be in all? *P.*—There must be four times four, or sixteen in all.

T.—Suppose that you turn the square so that the top is on the left side, could the measuring be done in the same way? Try it on the slates. *P.*—Yes, sir; it makes no difference which way I hold the square.

T.—Now tell me how you measure this figure which is four inches each way. *P.*—If there are four inches on one side, it means that there are four square inches in a row; and there being four of such rows, there must be four times four square inches, or sixteen square inches in the large square.

Other squares, of different dimensions, are drawn and measured in the same way.

T.—Now measure this four-cornered figure. *P.*—It has six square inches in a row, and four of such rows; then it must measure four times six, or twenty-four square inches.



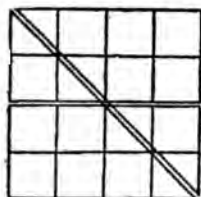
T.—Count them and see whether that is right. *P.*—It is.

T.—Turn your slates, so that the long sides of this figure are the side lines. How do you measure now? *P.*—The same way, only that there are only four in the first row; but then there being six of such rows gives the same result. Four times six is equal to six times four.

T.—Is it necessary every time to lay off the whole figure in little squares in order to measure it? *P.*—No; all you would need to do is to measure two sides and multiply the two numbers,

T.—Then let us do it.

Other parallelograms of different sizes are drawn and measured, the pupils rapidly sketched the figures, as the teacher did it on the board.



T.—Let us go back to our first square. Draw a line across it from one corner to the opposite corner. What does that line do? *P.*—It divides the square into two three-

cornered figures, or into two halves.

T.—Well, if the square measured sixteen square inches, what will one of these triangles measure? *P.*—Eight square inches.

T.—Now let us divide the square thus. (See figure in

the margin and dividing line from left to right.) Is this kind of a half as large as the triangular half? (Pupils hesitate.)

T.—If mother had a gingerbread cake of this shape, and you were told you might take one half of it, how would you cut it? (Pupil indicates that he would cut it on the diagonal.)

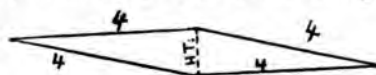
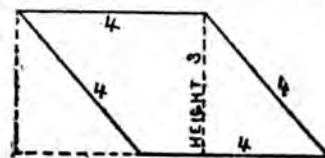
T.—Why thus? *P.*—Because I can begin to eat it better. (A ripple of laughter follows, but it causes no disorder. Proof that the pupils are quite at ease.)

T.—Well, children, what kind of a half would be larger? *P.*—They must be alike; a half cannot be smaller or greater than the other half.

By going over the two figures the pupils soon see that it is immaterial which way the cut is made, and that the triangle measures one half of the square.

Now the diagonal is drawn through the parallelogram, and the same truth is discovered. Then followed the rule, that such triangles are measured by multiplying the two sides of the rectangular figure and dividing the product by two.

Then the rhombus was drawn, and the pupils were told that multiplying the two sides would not do. The teacher demonstrated this in an ingenious way. He took an empty slate-frame and pressed it into the form of a rhomboid. When the pupils still doubted, he pressed it still more, so that the height was only one inch,



and thus showed them that the area of a rhombus made

of the four equal lines of a square was smaller than that of the square.

No such technical terms as parallelogram, rhombus, etc., were used, except square and triangle.

The measuring of the rhombus was performed as the dotted lines in the figure indicate, and the rule, that it is measured by multiplying one of the long sides by the height, fell like a ripe fruit from the tree of experience. Just then the bell rang, and the class was dismissed. The teacher told me that next day he would take the trapezoid also; that, however, was as far as he cared to go with these young pupils.

General Walker's Echo in Germany.

Being asked why he refrained from using any technical terms, the teacher said: "No; we don't burden the memories of our pupils with technical terms, such as trapezoid, rhomboid, parallelogram, parallelopipedon, etc. We call a rhomboid a four-cornered figure, and are done with it. The child in the common school is no happier, nor wiser, nor better prepared for life, when he has learned these Latin and Greek terms. If a boy enters a technical or a high school and studies geometry, the terms will be given

him there. The common school has no business to burden its course with ballast."

Further conversation with the faculty of the school revealed the fact that they all entertained the same view which General Walker in Boston urged lately; namely, that the study of arithmetic had in the course of time become overburdened with matter of a nature unsuited for the pupils of the common school, and that efforts were being made everywhere in Germany to eliminate such things. Said the rector of the school, to whom the assistant teachers all looked up with great veneration, he being a fine-looking, white-haired man, "We sound the battle cry, 'Elimination,' all along the line. We want to eliminate much from an overcrowded course of study in geography, grammar, and arithmetic, and add more literature and history, so as to counteract the vicious influence of bad reading-matter smuggled into the hands of our pupils by, Heaven knows, unscrupulous publishers. We want to do more in manual training, more in the so-called accomplishments, drawing, music, etc., introduce a little of book-keeping, and thus make the common school education what it ought to be,—practical. *We want to teach less for oblivion than hitherto.*"

I need not assure my readers how heartily I agreed with him. I felt quite at home among this earnest and enthusiastic body of teachers.

MARKING SLATES.

BY ALLAN DALE.

CORRECTING or marking slates is one of the needless tasks teachers impose upon themselves. Daily the slates which are covered with the problems of the lessons are placed high on the teacher's desk, and these she marks during her noon time or after school at night time, giving precious moments, even hours, to a labor that is productive of no better result on the part of the scholar, satisfies in no way the teacher, and to what end? If the weary teacher is asked her purpose in this she doubtless will reply that she desires to have the slate examined and marked, and she has found that if she wants a work to be well done she must do it herself.

Now, frankly and flatly, the game isn't worth the powder. If the time thus spent on slates were given to individual work with the dullards in the class results would follow that would make the teacher feel that her work was not in vain. In any of the grammar school grades scholars can be easily taught to correct and mark slates. The following methods have been employed and found to work advantageously, both for the teacher and the scholars.

Have the slates in any one line corrected by the teacher, and then let the owners of these slates pass along the other lines, marking the errors and making the corrections. Or the problems may be worked out on the blackboard,

the scholars having previously performed them on their slates and these for the time being placed in the desks. The slate may then be changed to other scholars, and the corrections made, the marker of the slate placing his name on the slate also.

A good plan is to have all the slates brought to the teacher's desk, beginning with the first line of boys, and placed in order, one on another. Then reverse the order, and have the boys of the last line and the other lines come and take a slate to their desk for marking. This mixes the slates up, and there can be no collusion therefrom.

It is worth while to establish, as far as possible, an *esprit de corps* in the class for honorable, square dealing, and have those whose slates show partial marking announce that fact as freely as they would complain of any other violation of their rights. When this spirit is established, and a good plan for marking the slates is in working order, the teacher's drudgery is at an end.

A LANGUAGE LESSON.

BY WM. M. GIFFIN, A.M., NEWARK, N. J.

THE other day I saw one of my teachers giving a language lesson which pleased me. The children were in the third-year class, primary department. The teacher stepped to the blackboard and wrote some words on it, something as follows:

John	fish	fishing
went		together.

She then asked how many could read the words. All hands were raised, and one pupil was called on to read them. Now, said the teacher, who can add some words to this list that will help us to write a story? Many were at once ready, and soon the following words were added: *Frank, caught, lunch, all day, good time, many, rod, line, home, came, fun, lots.* Next they were told to write a story, which was readily done.

I liked this exercise for these reasons: (1) It not only required a knowledge of the words but also their relation to some other words. (2) It quickened the imagination and caused first a mental picture. (3) It was a subject that all boys like, and hence it *won their attention.*

One pupil wrote: "John and Frank went a fishing they had lots of fun; they caught many fish; they took lunch so that they could stay all day." This was written on the blackboard, and then different pupils made different corrections.

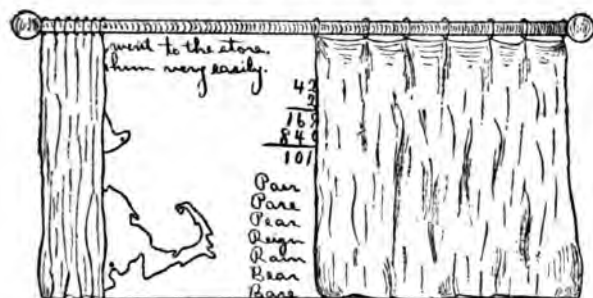
Some of my readers may say this was putting wrong forms before the pupils. My answer to this is that: pupils never have wrong forms put before them to correct in the school, they *may* get an idea that all forms are right and hence will go blindly through the world copying the wrong forms they see on store signs, office signs, show bill

newspapers, etc.; but if now and then they are called on to correct wrong forms they will be looking for and avoiding those of which they see hundreds every day in their lives.

There are wrong forms, however, that I think teachers should never put before their pupils; as, *unkindness, bad tempers, scolding, lying, selfishness, suspicion, anger, injustice, want of sympathy*, etc. Put none of these wrong forms before your pupils, and I will warrant that a few of the others will do no harm.

CURTAINED BLACKBOARD.

SEVERAL Boston schools have one board in each room provided with a curtain. A long brass rod, fastened at either end, is placed along the top of the board, and upon this a curtain slides from either end. By its use any board-work may be covered for a time when it is desirable. This enables the teacher to have many exercises that are not otherwise practicable.



MENTAL ARITHMETIC PROBLEMS.

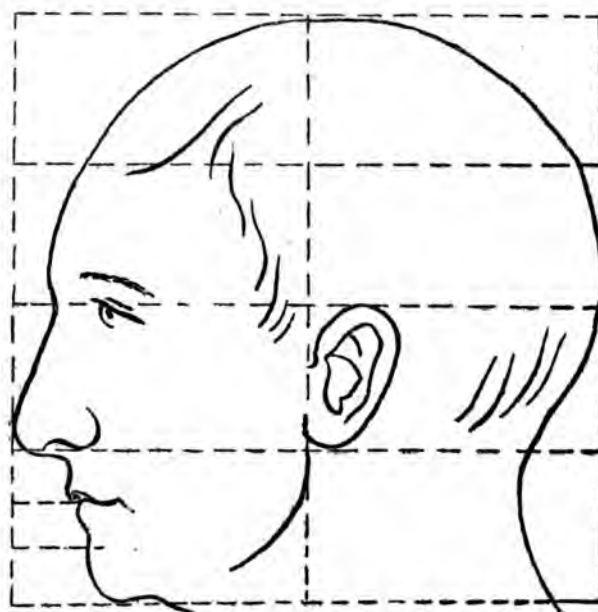
1. If a horse that cost \$400 is sold so as to gain \$4, what per cent. is gained?
2. If 4 is 10 per cent. of some number, what is 5 per cent. of the same number?
3. What is 10 per cent. of $\frac{1}{3}$ of 3 times 30?
4. What per cent. of a half-dollar does a two-cent apple cost?
5. $2\frac{1}{2}$ cents are what per cent. of 50 cents?
6. If \$3 be added to \$50, what per cent. is added?
7. If 14 bushels of potatoes were sold out of a pile containing 200 bushels, what per cent. was sold?
8. If a hat that cost \$10 is sold at a loss of 20 per cent., what is the selling price?
9. \$45 is what per cent. of $\frac{1}{2}$ of \$1,000?
10. $2\frac{1}{2}$ is what per cent. of $\frac{1}{2}$ of $\frac{1}{4}$ of 200?

We all owe more to others than we think, and it is in bad taste to allow egotism to puff us up to a belief that we have a right to patent every thought, method, or device in which we chance to indulge. This is an age in which we learn more by assimilation than we think. Agglutination is as perceptible in philosophy as in language.

DRAWING.

BY PROF. D. R. AUGSBURG, PENNSYLVANIA.

WE have little idea how crude and indefinite the average knowledge of form is until we make the experiment. Ask a class of students, or any number of people to draw the outline of a human head on a piece of paper, and note the result. The human head is the most common, most looked at, and the most interesting object in the world, and ought to be well known. The following illustrations will give the average effort. Try and see for yourself. No. 1 is a correct outline. Notice, the head is



No. 1.

made in a square, the eye is half-way between the top of the head and the bottom of the chin; the base of the brain, the bottom of the ear, and the lower end of the nose are level with each other. Now compare No. 1 with Nos. 2 and 3, and you will, at once, see how accurate the average idea of form is.

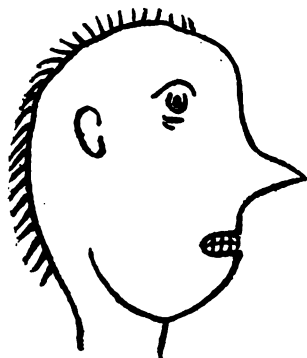
Now what does this teach us? It teaches us that the eye does not see correctly and intelligently, even the most common objects, without training; that it is just as necessary to train the eye how to see as it is the brain how to think, or the ear how to hear, and there is little doubt now but what one is just as essential as the others.



No. 2.

How shall drawing be taught? If this question was to be answered in one sentence the answer would be: Drawing shall be taught just as any other fundamental branch is taught, and that is to begin at the beginning in the first years of school life, by the side of reading and spelling, and master it step by step. Drawing should be taught in this way because it is based on no other branch."

There are certain branches that must be acquired before advance in other studies is made; these are fundamental studies, and those that follow depend on them very much as the limbs of a tree depend on the trunk. Reading, spelling, arithmetic, and grammar are such studies, and become the basis of many other branches that come after them. In like manner drawing is a fundamental study. As arithmetic is the first study of mathematics, as grammar leads to an understanding of language, so drawing is the door to that great form and solar language that is not only universal but is the foundation of many of the mechanical, and all of the reproductive arts; it is the basis of that wide field of usefulness in which the hand, the eye, and the mind work as one unit.



No. 3.

There is much prejudice to overcome in teaching drawing. Parents have an idea that it is no more than a mere accomplishment, and of little practical value simply because it was not taught in their day, and because their ancestors did not feel the need of it; and thus students have a sort of hereditary feeling that time spent on this branch is next to being thrown away, and thus do not give as earnest work to it as to other branches that have received the sanction of their forefathers. As a result of this way of thinking and feeling we have a people that, comparatively speaking, use their eyes very little. So we not only have to overcome prejudice, but the hereditary result of prejudice that has come through long years of neglect. This can be overcome only by slow and persistent effort from one generation to another by teachers who have been specially fitted for the work.

A BLACKBOARD LANGUAGE LESSON.

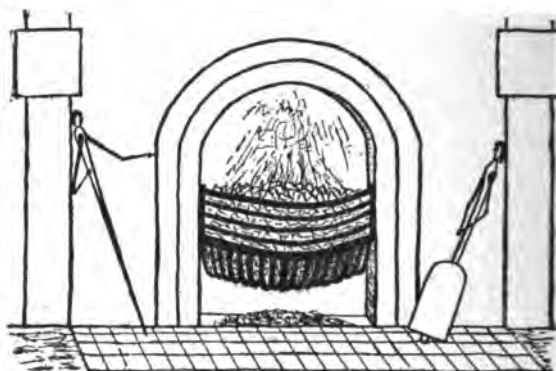
BY LOUIS B. WILSON, DES MOINES, IA.

IT was a fourth grade school of nine-year old pupils. The regular program had been broken into by a special teacher with a long, difficult lesson. All were tired, but the language hour had arrived, and what was to be done? That was the way it came about. This is what followed:

"Children, take your best resting position. I am going to make some pictures, and you may look at them and

think about them as much as you please, but you must not speak a word until I give you permission."

So said the teacher; and then, stepping to the blackboard, with a few deft strokes of the crayon brought out this:



During the sketching, involuntary "oh's" and "ah's" would escape from the bright-eyed watchers, and as the teacher turned toward them a shower of hands were fluttering. These were quieted with a gesture and at the other end of the blackboard this scene began to grow:



When it was finished, the teacher, turning to the hands that had now become a storm and were demanding a hearing, said, "No, no; we will not talk about it at all. Take your slates. Think with what you always begin a story. Remember your capitals and periods. You may ask me about any word you cannot spell. Two minutes, now, to think of what you are going to say. Write."

When the stories were finished the best and poorest, considered as to form of expression, not as to thought, were placed on the board by their writers, and criticised by the other pupils.

The poorest one furnished plenty of drill in the technicalities of the work and the best one a standard, accurate enough in itself and yet one which every pupil would try to reach since it was written by a member of his own class.

We give below some of the visible results. Among those not seen were the training of perception and imagination, practical lessons in politeness, drill in use of words, etc.

MR. POKER AND MISS SHOVEL.

Mr. Poker and Miss Shovel were sitting in a room beside a very hot fire. All at once Miss Shovel said: "It is so warm in here! I am going out of doors."

So she dressed and went down town. She took her satchel with her to pay her bill at the butcher's. As she was walking along she met Mr. Poker. He was out walking, too. It was too hot for him at the fire. He was very civil and took off his hat and said: "How do you do, Miss Shovel? I am very glad to see you." She replied that she was, too, and held out her hand to shake hands. And although he was going on an important errand to a tailor shop that a big dutchman kept, he took her all the way home and then went back.

FANNY S.

THE MEAT BETWEEN A CUPLE.

Ounce ther was a lady and a jenttulan. They met on the streat one day. They spoke and shuck and shuck hands. And said howdoyou do. The jenttulan name was mr. Poker. And the ladus name was Mrs. Shovle. The lady had a sun but nothing like herself. The reazun was because the lady was tall. And her sun was short and fat. He was bowl leged and looked liker barl.

While they were talking her sun came along it skirt the man and he ran for home. He Said that he would never bother with that woman agen. And he never neather.

NELSON D.

GEOGRAPHY.—(III.)*

Form of Horizon—Position.

(FOR PRIMARY CLASSES.)

BY A. H. KELLEY.

TEACHER.--When we were standing out on the broad plain, with nothing to prevent us from seeing far away, what did we call the line where the earth and sky seemed to meet all around us?

Pupil.--When we were standing out on the broad plain where the earth and sky seemed to meet all around us, we called the line our horizon.

T.--Now will some one tell me the shape of this horizon line which is all around us as far away as we can see?

P.--Our horizon line is round.

T.--Please tell me something that our horizon line is like.

P.--Our horizon line is like a ball.

T.--How many think our horizon line is round, like a ball? How many think it is round, like something else?

P.--Our horizon line is round, like a hoop.

T.--That is a very good answer. Is our horizon line like a large or a small hoop?

P.--Our horizon line is like a very, very large hoop.

T.--How is the very large hoop, which we call our horizon line placed? Like this (Fig. 1)? or like this (Fig. 2)? (Indicate by holding a hoop before the class as shown in Figs. 1 and 2.)

P.--I think our horizon line is placed as you had the hoop last.

T.--Will you come and place the hoop as you think our horizon line is placed?

P.--Our horizon line is placed so (placing the hoop upon the floor).

T.--We all see that our horizon line is like a great hoop, placed as Frank has placed this hoop, but very much larger. How large is this great hoop called our horizon line?

P.--The very large hoop, called our horizon line, is as large as the world.

T.--I don't think it is quite as large as the world, for the world is very large indeed. Can some one else tell me how large our horizon line is?

P.--Our horizon line is as large as we can see.

T.--You have answered very well. Why do you think our horizon line is "as large as you can see"?

P.--Because the line where the earth and the sky seem to meet all around us is called our horizon, and we cannot see any farther.

T.--You have answered very well. Now who can tell me the shape of our horizon line?

P.--Our horizon line is shaped like a hoop.

T.--We will call this stick a little man, and this hoop his horizon line. Now you tell me where I shall place our little man.

P.--You should place the little man in the hoop.



Fig. 1.

Fig. 2.

Fig. 3.

T.--How shall I place the little man? I can place him like this (indicating as in Fig. 1), or like this (Fig. 2), or like this (Fig. 3). Which way is right?

P.--The little man should be placed in the middle of the hoop.

T.--That is very well. Our horizon forms a great circle where the earth and sky seem to meet, and we are at the center of the circle just as our little man is at the center of the hoop. Every person stands at the center of the great circle made by his horizon. Where does every person stand?

P.--Every person stands at the center of the great circle made by his horizon.

MUSIC DEPARTMENT.

AVOID ONE-SIDEDNESS IN SCHOOL MUSIC.

BY W. S. TILDEN.

THE teacher needs to consider carefully and comprehensively the real scope of musical study, — what should be sought in it, and what may be reasonably expected of it, in order to avoid falling into a narrow, partial, and inadequate mode of instruction. In the absence of such consideration one may, it is true, do some striking things within his own small range, — things astonishing and greatly captivating, perhaps, to persons whose horizon is equally circumscribed. But it is found, after a while, that he has been harping in an especially animated way upon some one of the many phases of musical instruction; quite likely one of subordinate consequence, and leaving other and broader fields of effort uncared for.

We shall be aided in our endeavor to obtain a sufficiently comprehensive view of this department of study if we follow the suggestions of an able German writer, who thus defines the objects to be sought in the musical art, placing them in the order of their relative importance :

I. *The Ideal and Æsthetic.*

Under this head we are to consider the awakening power of music upon the sacred and higher feelings; making the heart accessible to better emotions, freeing thought and action from the low and coarse, and directing them to the lofty and beautiful. Closely connected with this supreme aim in the later stages of instruction stands the *literary*, — acquaintance with classic tone-creations, the works of musical artists.

II. *The Material.*

He who possesses the gift of song is able to take part on those occasions, sacred and secular, where music is such an important adjunct; he can, furthermore, procure to himself and to others a great deal of enjoyment, and that, too, of a pure and unexceptionable kind.

III. *The Formal.*

By this is to be understood the culture of ear and voice, knowledge of elements, and some facility in music reading; these all, however, being but means to the more comprehensive attainment of the foregoing objects.

While the higher achievements in school music are impossible without much attention to formal study, and every one must surely recognize its importance, yet how often have we seen that which is really but a means exalted practically to the place of chief aim! If music, *as music*, with its power to move and to impress us, independent of all technicalities, is lost sight of in the zeal for a formal presentation of its elements and its incidentals, the pupils will miss the promptings of musical feeling; and we shall find them coming more and more to sing their "exercises" with an interest which springs

from a paltry conceit of ability to overcome a certain round of little difficulties, rather than from a development of the gift of song within them which moves to hearty, self-forgetful, spontaneous utterance.

It is much easier to busy ourselves with trifles than to work for comprehensive and far-off ends, and it is the invariable resource of the inexperienced. Such a course sacrifices the paramount to the lower and subservient; like the French surgeon who admitted that, in certain cases, his patients all died, "but the *operation* was very brilliant."

But it is possible to pursue a course which, while it gives so much of formal instruction as to keep pace with the real musical development of the pupils, (and no more than this should be attempted), still keeps the paramount object always in mind. To this end much glib talk about keys, flats, sharps, and other symbols, — ingenious explaining of matters of theory, — endless drill in "striking pitches," which have no connection or sense to the child's mind, except that the teacher called for them, — and great numbers of tedious, sight-singing exercises, which amount to nothing when sung, — should be abridged in favor of something more vital, or remanded entirely to a later period than is frequently done. Without doubt small children can be taught to show off some smart little tricks; and it might seem that great advantages are to be derived from an early acquaintance with technical work. But as the little folks cannot couple this kind of study with real music, — as they cannot at present make any adequate use of such knowledge, — it is unassimilated, and becomes of no more value to them than the learning of the moods and tenses of the verbs in their primers; and premature development of any kind affords no surer promise than do apples which show signs of ripening in June.

A valued friend and judicious teacher lately said that some years ago he had a bright little class in which he made a specialty of "striking pitches" at dictation. They attained great facility in that sort of thing, and being among the youngest of the primarians, won a great deal of admiration from visitors. They could sing anywhere from lowest to highest as soon as the numeral was called or a given place in the row of notes on a staff was pointed out. Now, thought the teacher, when these children come to the upper grades they will show a proficiency much beyond any that have preceded them. But such did not prove to be the case; they rose to their high-water mark in doing that interesting work in their primary days, and were not noticeable afterward as being anything above the common level. Their extended practice of sounds, unconnected as it must be at that early time, with anything essentially musical, seemed to lie an indigestible mass, giving no nourishment.

Analogous to this experience was that of another teacher who was appointed to a school where playing at "striking pitches" had taken chief place in music lessons

for some time. These pupils had no difficulty in following hand signs, or the pointer on the written scales; jumping from key to key with great rapidity and precision. But although they belonged to the upper grades, when it came to reading and rendering even a simple song breathing the breath of musical life, they were as powerless as though they had never heard of music reading; their training had been one-sided and largely unproductive. The trouble is in such cases that, though the sounds called for are sung, they are taken not in a *musical* but in an *arbitrary* way merely; had their study been connected with some expression of true musical thought, it might have been made, as the course proceeded, conducive to far worthier ends.

PRACTICAL DRILL ON DIACRITICAL MARKS.

BY CLARA E. MARSH, PARKERSBURG, W. VA.

It sometimes happens that pupils in the intermediate grades who are familiar with the diacritical marks and the corresponding sounds fail to make practical application of their knowledge in the pronunciation of words and are unable to use the dictionary effectively. An exercise calculated to remove this difficulty may be given in schools where any of the modern spelling-books are used. Turn to the pages that have not been studied and which contain unfamiliar words, and allow the pupils to pronounce them in order, *not* as a concert exercise. When one fails, as many will, another can usually correct the error, and after

a while even the slow boy comes to appreciate the force of the accented syllable, the silent letter, the difference between hard and soft *g*, and long and short vowels.

THAT stubborn, obstinate boy whom you almost hate, has the "sand in him," as the frontiersmen say, and though you cannot endure him, he will make the greatest man of all your boys if he is rightly handled. He will be the man for emergencies, and such men the world prizes, for any one does for fair weather, but only the man of grit and unflinching heroism will do for the emergency.

BE patient with those slow, penetrating, faithful pupils who wear your life out by getting round the "day after." The chances are that they will distance in the race of life those brilliant boys and girls who are your delight.

BEWARE of intermittent efforts on the part of the pupils.

WINTER.

Words and Music by J. WOOLLETT.

1. Win - ter sea - son now is here, Hur-rah! hur-rah! hur-rah!
 2. Hear the sleigh-bells on the hill, Hur-rah! hur-rah! hur-rah!
 3. Now the coast - ers start in train, Hur-rah! hur-rah! hur-rah!
 4. Bobs and bells, and skat - ing gay, Hur-rah! hur-rah! hur-rah!

Al - ways bring-ing us good cheer, Hur-rah! hur-rah! hur-rah!
 Hope and joy our bos - oms fill, Hur-rah! hur-rah! hur-rah!
 Down the hill they plunge a - main, Hur-rah! hur-rah! hur-rah!
 Turn the win - ter bright as May, Hur-rah! hur-rah! hur-rah!

Snow and frost is our de - light, Fill - ing us with glee,
 Stud - ies o - ver, then we're out, Join - ing in the spree,
 Bound-ing swift - ly in the course, Mer - ry as you see,
 Wel-come sum - mer; work and care Fill stores for you and me,

Coast - ing, skat - ing in our might, Glad and free.
 Laugh - ter ming - ling with the shout, Light and free.
 All are heat - ed in the race, Hap - py, free.
 Praise and glad - ness ev - 'ry - where, Full and free.

From "Children's Graded Singing Book, Book II." by permission.

Published by F. H. GILSON, Boston, Price 15 cts.

THE AMERICAN TEACHER.

A. E. WINSHIP, } Editors.
W. E. SHELDON, }

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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BE cheerful.

BE not over-anxious to cultivate your reputation.

DO the best you can, and do not worry about results.

SCHOOL DISCIPLINE is composite, very composite sometimes.

IN play a child feels that he is his own master, in work he feels that he is another's servant.

THE pupil must have confidence in his reading or he will not read well.

THE individuality of the pupil must be respected so far as time and circumstances will permit.

NEVER play and work together. They are radically different in spirit, in purpose, in methods.

EVERY pupil should be made to realize that when he does life's work he must depend upon himself, that his school life is to fit him to depend upon himself.

SYSTEMATIC work on the part of teacher and pupils is what tells. Flighty, spasmodically brilliant efforts are of little account.

RUSSIA spends \$5,000,000 upon education and \$165,000,000 for the maintenance of her army, and still she wonders at the multiplication of Nihilists and Socialists.

READING rightly taught is the most important subject

in the common school course, opening, as it does, the door to everything else.

THERE ought to be a American flag in every school-room in the land. A large one is best; a small one is good enough; a blackboard map in colored crayon is very good.

EVERY subject taught should grow upon the class each day. When the interest ceases its value is lessened, but it is too much to ask that a teacher of fifty pupils teach in the best way every day.

SUPT. A. S. DRAPER, of New York, speaks with no uncertain sound upon the subject of spelling, as it is not taught under modern inspiration. He places spelling as the second most important subject taught in the public schools.

THE schools have few things to fear more than a well intentioned but unbalanced enthusiasm of outside philanthropists who think it their duty to utilize so great a force for their special aims. We always fear a rebound. The greatest ultimate good through the schools is in the exercise of the greatest common sense.

MUCH good is often done by attaching important facts to some easily remembered rhyme, or some easily acquired habit. Who of us would feel sure of the number of days in November or March, but for that unforgettable rhyme:

Thirty days hath September,
April, June, and November, etc.

SAN FRANCISCO is to welcome the National Educational Association next July, and Supt. Aaron Gove of Denver is president this year, and Prof. J. A. Canfield of Lawrence, Kansas, is secretary. Railroad rates are to be much reduced, and every effort will be made to make the meeting a great success.

THE school is not only to teach facts and processes, principles and methods, but it is to furnish "momentum of mind and will." It is to establish habits of thinking and acting. It will not make every child thoughtful; all the forces of earth combined will not do that; it will not give every child a strong will, but it will raise the standard of thought and choice with many of the pupils, as it would not else have been raised.

EVERY mind has both harmonious and discordant ideas, and it is the principal work of the teacher to cultivate, multiply, and intensify the former while he exercises, dwarfs, and withers the latter. Ideas dislike to be where they are not welcome, and the teacher by his direction and emphasis largely determines whether the pupil's mind shall welcome most heartily harmonious or discordant ideas.

NEWPORT, R. I., has been selected as the place of meeting of the American Institute of Instruction; J. Milton Hall of Providence is the president, and Ray Green Huling of New Bedford is the secretary. No one who can go to San Francisco will remain at home for the

sake of going to Newport, but those who cannot go to the Pacific Coast ought to go to the most delightful spot on the Atlantic Coast. It only needs enough of the right kind of work put into it to have a meeting such as New England has never known. We should like to see four thousand teachers thronging Newport next July.

THE genuinely dull boy, who wants to learn but cannot learn all that the others do, who cannot say two twos are four till after the rest of the class have forgotten the question, who cannot understand your explanation, who cannot remember what he is told, who cannot do what seems to the others to do itself, must be borne with indefinitely. He may never be much of a man, and then again he may. It will certainly do him and you no good for you to tell him how dull and stupid he is.

ALLOW no child to think that he does not need an education because he is a genius. Because Mark Twain, Benjamin Franklin, Abraham Lincoln, the Cary sisters, and others won fame without schooling, because some in this day will do so is no reason why any one should neglect his opportunities. No one ever regretted the lack of early training more than the successful men who did not have it. Impress upon your pupils the indispensable virtue of good schooling.

FEW of those conversant with school matters appreciate what a development of the school system there has been in the past few years. In 1850, for illustration, the average daily attendance in New York City was 40,000, while in 1886 it was 153,000; in the former year there were but 1338 teachers, and in the latter there were 4,098; in the former the expense was but \$274,000, in the latter \$4,000,000. In the forty years, from 1805 to 1845, New York state paid less for her schools than she now pays in a single year.

DEINHARDT says that the habit of obedience must be formed as early as the will manifests itself. We live in an age in which obedience is almost a lost art in home and government. Obedience for the sake of obedience is not the highest virtue, but it is absolutely indispensable, and the school must secure obedience, not only for the discipline of the school, but also for the good of the pupil. It is a greater intellectual acquirement, not to mention its moral value, than arithmetic or grammar.

MONTAIGNE demanded, above all else, independent judgment of the pupils, saying: "The bees gather sweets from the flowers here and there, but they make honey thereof which is entirely their own; it is neither thyme nor gentian. In the same way the pupil will change and transform a work wholly his own." This is good in its way, but with pupils changing teachers every year the teacher does well who establishes certain fundamental principles of action and habituates the pupil to make choices along the line of those principles without forming an independent, individual judgment each time.

COMPENSATION FOR TEACHERS.

ALL honor to the state superintendent of New York for pleading vigorously for better financial support of teachers who, he says, ought to be paid according to length of successful service and responsibilities assumed, without reference to whether their employment is in the lower or higher grades:

"Pay should be sufficient to ensure a comfortable and respectable living, and if any class of public servants are to be retired, after a specified length of successful service, on a pension, then teachers ought not to be left out. None require higher or better qualities of head and heart; none carry weightier cares; upon none are the public demands more exacting. The officer in the army or navy is no more deserving. My admiration is always aroused when I see a stalwart, fine-looking man in blue uniform commanding traffic to stand still and helping the ladies and rural men across Broadway. I think if he does it manfully for a sufficient length of time he ought to live to a good old age, and the city ought to see that he dies in comfort. But I know of no reason why *he* should be given a pension which is not equally applicable to the case of the woman who, for the same length of time, in the dingy building around the corner, perseveringly cultivates the intellects and shapes the moral character of fifty or more of the city's children, unless it be the fact that he is a man and she a woman, and that when capable of labor he received twice the pay that she did."

ENCOURAGE ORIGINALITY.

OCCASIONALLY the weekly routine is varied by introducing a "free-day"; that is, the children choose the reader to be used and the story to be read both in the morning and afternoon; all the musical and calisthenic exercises are selected by individual volunteers. When the time for busy work comes the class is directed to find the story, or poem, best liked, and from it copy a certain number of paragraphs or verses. This is one of the most charming means of getting at the individual peculiarities of taste that sometimes make teaching a puzzle. In language the children are asked to name any object or subject about which they would like to "build" a story, and under the teacher's guidance very original results occur. Any object about the room is chosen as a model for either a drawing or modeling lesson, though once in a while each child is allowed to think of some object (not visible) which must be reproduced in clay or represented in line-work. If the art exercise for the day is of the nature of design the children are told to choose from a certain number of forms, already familiar, that which most appeals to the individual taste, and weave the same into a design. If, perchance, the free-day falls upon one when a physiology talk should occur, certain pupils may tell all they know about any particular lesson already learned, while other pupils develop the illustrations that may later be imitated by the entire class as busy work. On such a day some of the pupils make out the examples, while others decide what the remainder of the number-work shall be.

FOR FRIDAY AFTERNOON.

GEORGE WASHINGTON.*

An Exercise arranged for his Birthday.

BY S. E. FISHER, LEWIS SCHOOL, BOSTON.

1. "MARK his majestic fabric! He's a temple
Sacred by birth, and built by hands divine,
His soul's the deity that lodges them;
Nor is the pile unworthy of the God." —Dryden.

2. *George Washington! Our Washington!*

A name revered by all! A watchword of our union! A wise, a good, and a great man! With prudence, firmness, sagacity, moderation, an immovable justice, courage that never faltered, patience that never wearied, truth that disdained all artifice, it seems as if Providence had endowed him, in a preëminent degree, with all the qualities requisite to fit him for the high destiny he was called on to fulfill; to conduct a momentous revolution which was to form an era in the world's history, and to inaugurate a new and untried government, which was to lay the foundation for the enjoyment of much purer civil government and greater public happiness than had hitherto been the portion of mankind. The wise teachings of his public life, alone, are worthy of perpetual remembrance. Some of these we quote, with traits of character and incidents and anecdotes of his private life as well.

3. *Personal appearance of Washington.*

Mrs. John Adams wrote thus to her husband, after seeing him as he took command of the army at Cambridge, in July, 1775: "Dignity, ease, and complacency, the gentleman and the soldier, look agreeably blended in him. Modesty marks every line of his face." In stature six feet two inches high, his person well proportioned, never too stout for easy movement, muscular development perfect, and capable of great physical endurance. He was scrupulously neat, and extremely attentive to the proprieties of dress and personal appearance. His manner was gracious and gentle, though dignified and reserved.

4. *Washington's education.*

His education was plain and practical. The object of his family seems to have been confined to fitting him for ordinary business. He received only the education of the schools of the neighborhood, where his instruction did not go beyond reading, writing, and arithmetic, with the addition of bookkeeping and surveying; for the latter of which he had great fondness and in which he became a great proficient, making it his profession. He never went to college nor studied the ancient languages. He paid some attention to the French language, after the army of Count Rochambeau arrived in America, but never attempted to speak or write it. His penmanship was good, and his manuscript, school books, still extant, are models of neatness and accuracy.

5. *Hair-breadth escapes of Washington.*

Washington, at the early age of twenty-three, served as aid-de-camp to General Braddock, in the battle of Fort Duquesne. In a letter to his brother Lawrence, he said: "Four bullets passed through my coat, and two horses were shot under me, yet I escaped unhurt, though death was leveling my companions on every side." A seal worn by him, with his initials on it, was shot away from his person and found eighty years after on the field of battle. It is said that during this engagement he was singled out by an Indian chief as an especial mark. Some years after this battle this old chief came a long way to see the Virginia officer at whom he fired a rifle fifteen times without hitting him. Alluding, afterward, to

* Some of the parts may be omitted if the exercise be deemed too long. All the poetry may be given as concert exercises, and the other parts by different pupils of the school, in the order numbered.

this battle, Washington said: "I heard the bullets whistle, and believe me, there is something charming in the sound." This speech, coming to the ears of King George, he said, "He would not say so if he had been used to hear many." Washington was of the same opinion when he became more experienced in warfare.

6. *Washington was a man of large means.*

At the death of his father he inherited a goodly estate on the Rappahannock River, near Fredericksburg, and his brother Lawrence, dying a few years after, left a large fortune to his infant daughter who did not long survive him. By the will of Lawrence, George was made his heir at her demise and received the vast estate of Mount Vernon. By his marriage with Mrs. Martha Custis, a rich widow, in 1759, he added one hundred thousand dollars to his already large fortune. By the purchase of adjacent plantations he enlarged the Mount Vernon territory, until it finally amounted to eight thousand acres.

7. *His home at Mount Vernon.*

His mansion was finely situated on a swelling height, crowned with wood, and commanded a magnificent view up and down the Potomac River. Many articles of elegance and luxury, imported from England, adorned its interior. He had his chariot and four, with black postilions in livery, for the use of Mrs. Washington and her guests; but he, himself, always appeared on horseback. His stable was well filled and well regulated. He had his legion of house slaves and his host of field negroes. These were all freed by his will on the death of his wife. All the appointments of his home were liberal,—well-fitted to the free-hearted, open-handed hospitality of its owner.

8. *His daily life at Mount Vernon.*

In a round of rural occupations, rural amusements, and social intercourse, Washington passed several tranquil years, the halcyon season of his life. His established reputation drew many visitors to his home; some of his early companions in arms were his occasional guests. He delighted in the chase, was a bold rider and an admirable horseman. In the height of the hunting season he would be out with his fox-hounds two or three times a week, accompanied by his guests and the gentlemen of the neighborhood, especially the Fairfaxes of Belvoir. Canvas-back ducks abounded there, in their season, and the shooting of them was one of his favorite recreations. Occasionally he and Mrs. Washington would pay a visit to Annapolis and partake of the gayeties which prevailed during the session of the legislature. The society there was always polite and fashionable and very exclusive. Dinners and balls abounded. Ladies who were belles in his day prided themselves on having had him for a partner, though, they added, he was apt to be a ceremonious and grave one. His social enjoyments, however, were never permitted to interfere with the graver duties of his life.

9. *Characteristic punctuality and method of Washington's life.*

His punctuality was as proverbial as his truthfulness. He carried into his rural life the same method, activity, and promptness that distinguished his military life. He kept his own accounts, posted up his books, and balanced them with mercantile exactness. He was an early riser, often before daybreak in winter. On such occasions he lit his own fire, and wrote or read by candle-light. He breakfasted at seven in summer and at eight in winter. Immediately after breakfast he mounted his horse and visited those parts of the plantation where any work was going on, seeing to everything with his own eyes, and often aiding with his own hands. Dinner was served at two. He took tea, of which he was very fond, early in the evening, and retired for the night about nine o'clock.

10. *Excessive modesty of Washington.*

Soon after taking up his permanent residence at Mount Vernon he was elected to the House of Burgesses. By a vote of the House it had been determined to greet his installation by a signal testimonial of respect. Accordingly, as soon as he took his seat, Mr.

Robinson,—the speaker,—in eloquent language dictated by the warmth of private friendship, returned thanks in behalf of the colony for the distinguished military service he had rendered to the country. Washington rose to reply, but blushed, stammered, trembled, and could not utter a word. "Sit down, Mr. Washington," said the speaker; "your modesty equals your valor, and that surpasses the power of any language I possess."

11. *Honesty a prominent trait of Washington's character.*

His honesty, like his veracity, was unquestioned. It is well known that the products of his estate became so noted for the faithfulness as to the quantity and quality with which they were put up, that any barrel of flour bearing the brand of George Washington, Mount Vernon, Va., was exempted from the customary inspection in the West India ports.

12. *This little anecdote illustrates his remarkable kindness.*

While the army was encamped at Morristown, he one day attended a religious meeting where divine services were to be conducted in the open air. A chair had been set out, in a conspicuous place, for his use. Just before the services began, a woman with a child in her arms approached. All the seats being occupied, Washington immediately arose, placed her in his chair, and remained standing during the entire service.

13. *His thoughtfulness for the poor people of his neighborhood was a marked feature of his character.*

When absent from home as commander of the American army he gave the following noble direction to his agent concerning Mount Vernon: "Let the hospitality of the house, with respect to the poor, be kept up. Let no one go hungry away. If any of this kind of people should be in want of corn, supply their necessities, provided it does not encourage to idleness, and I have no objection to your using my money in charity, to the amount of forty or fifty pounds a year. What I mean by having no objection is, that it is my desire it should be done. You are to consider that neither myself nor my wife are now in the way to attend to these things."

14. *Washington rarely laughed heartily.*

The occasions when Washington indulged in hearty laughter were so infrequent that they were noted down in the remembrance of friends. An old negro,—a slave of his,—used to say that his master never laughed to show his teeth, but did all his laughing inside. Mrs. Washington's grand daughter,—Nelly Custis,—recalling, in after-life, the scenes and incidents of her childhood's days, many of which she spent in Washington's hospitable home, writes: "I have sometimes made him laugh from sympathy with my joyous and extravagant spirits," but adds, "He was a silent, thoughtful man." One of the few instances recorded of his being surprised into hearty laughter was the sudden appearance of old General Putnam, on horseback, with a fat woman as prisoner, *en coupé*. Another was at the camp at Morristown: Washington had secured a young horse of great spirit. A braggadocio of the army, vain of his horsemanship, asked the privilege of breaking him. Washington consented, and with some of his officers was on hand to see the animal receive his first lesson. After much preparation the braggart mounted the steed and was displaying his vaunted skill, when the horse suddenly planted his fore feet, threw up his heels, and gave the unlucky horseman a somersault. Washington, a thorough horseman and quick to perceive the ludicrous in such matters, was so convulsed with laughter that the tears ran down his cheeks.

15. *His relish of a joke.*

Col. Henry Lee, who used to be a favorite guest at Mount Vernon, does not seem to have stood much under the influence of that "reverential awe" which Washington is said to have inspired, judging from the following anecdote: Washington, one day at table, mentioned his being in want of carriage horses, and asked Lee if he knew where he could get a pair. "I have a fine pair, General," replied Lee, "but you cannot get them." "Why not?" "Be-

cause you will never pay more than half price for anything, and I must have full price for my horses." This bantering reply set Mrs. Washington laughing, and her parrot, perched beside her, joined in the laugh. The General took this familiar assault in good part. "Ah, Lee, you are a funny fellow," said he; "see, that bird is laughing at you."

16. *His retirement from military life.*

The efficient military services, both in the French and Indian and Revolutionary wars, which Washington gave to his country for so many years, though very interesting and instructive, are so well known to us, and have been so frequently recounted that we, here, pass them over. In 1783 he resigned his commission as commander-in-chief of the American forces, which he had held for eight years, and returned to private life, at Mount Vernon,—his harbor of repose,—where he furled his sail and fancied himself anchored for life. To Colonel Knox he wrote soon after, "I feel now as I conceive a weary traveler must, who, after treading many a weary step with a heavy burden on his shoulders is eased of it, having reached the haven, and is looking back and tracing with an eager eye the meanders by which he escaped the quicksands and mires which lay in his way and into which nothing but the all-powerful Guide and Dispenser of human events could have prevented his falling."

17. *His election to the Presidency of the United States.*

Only a few short years of domestic life were his when he was elected chief magistrate of this Republic for a term of four years. An entry in his diary at that day is this: "I bade adieu to Mount Vernon, to private life, and to domestic felicity with a mind oppressed with more anxious and painful sensations than I have words to express, and set out for New York with the best disposition to render service to my country in obedience to its call, but with less hope of answering its expectations." He had won laurels in the field; would they continue to flourish in the cabinet? His progress to the seat of government was a continual ovation. The ringing of bells and roaring of cannon proclaimed his course through the country. The inauguration took place, April 30, 1789.

18. *Washington's first public dinner.*

He was no epicure, nor critical about his food, and retained this simple taste throughout life. A letter written by Judge Wingate and still preserved, contains an account of his first public dinner after repairing to New York. The guests consisted of the Vice President, the foreign ministers, the heads of departments, the Speaker of the House of Representatives, and the senators from New Hampshire and Georgia. He said: "It was the least showy dinner that I ever saw at the President's table, and the company was not large. Washington said a very short grace as he was sitting down, there being no chaplain present. He made his whole meal off a leg of boiled mutton. After the dessert had been served, one glass of wine was passed round the table. The President then rose, and all the company retired to the drawing-room, from which the guests departed, as every one chose, without ceremony."

19. *His first Presidential levee.*

Every Tuesday afternoon Washington gave a formal levee, where much ceremony was required. One who was present on several of these occasions has left this account of them: They were held in the dining-room of the modest home of the President, commencing at three o'clock. Every seat was removed from the room. On entering, the visitors saw the tall, manly figure of Washington, clad in black silk-velvet, his hair powdered and gathered behind in a large silk bag. He wore yellow gloves on his hands and a cocked hat with a black cockade, the edges adorned with a black feather about an inch deep. He wore knee and shoe buckles, and a long sword. He stood in front of the fireplace, with his face toward the door of entrance. The visitor was conducted to him and his name distinctly announced. The President received each guest with a dignified bow, avoiding to shake hands, even with his best friends. At a quarter past three the door was closed, when Wash-

ington began on the right, spoke to each person, calling him by name and exchanging a few words. Having completed the circuit he resumed his first position, when the visitors again approached him, bowed and retired.

26. Washington's Farewell Address.

Washington was re-elected to office. As his second term drew to a close, he announced his intention of retiring from office, and preparing a rough draft of a farewell address, he submitted it to Alexander Hamilton for revision. It appeared in September, 1796, producing a great sensation. In December following he met the two houses of Congress for the last time. A touching incident is told of him as he was preparing to read his memorable address. Removing his spectacles and turning to those about him, he said: "My eyes have grown dim in the service of my country, but I have never yet learned to doubt her justice."

21. Closing scenes of Washington's life.

His official duties terminated, March 4, 1797, leaving the nation in a state of great prosperity. He again sought the quiet of his country home, "where," he wrote a friend, "I hope my remaining days will glide smoothly on." Here he remained till his death in December, 1799. Congress, which was in session, immediately adjourned for the day. The next day, it was resolved that the Speaker's chair be draped in black; that the members and officers of the House wear black during the session and that soon a committee be appointed to consider the most suitable manner of doing honor to the man "first in war, first in peace, and first in the hearts of his countrymen." Public testimonials of grief and reverence were displayed in every part of the Union, and when the news reached England the commander of a fleet of nearly sixty sail of the line, lying at Torbay, lowered their flags at half-mast. Bonaparte, —First Consul of France,—on announcing his death to the army ordered that black crape should be suspended from all the standards and flags throughout the public service for ten days.

22. Patrick Henry's verdict of Washington.

Washington, as previously mentioned, was a member of the House of Burgesses. He held this position for several years, and was subsequently chosen to represent Virginia in general Congress at Philadelphia in 1774. Patrick Henry, at the close of the first session, being asked whom he regarded as the greatest man in Congress, replied: "If you speak of solid information and sound judgment, Colonel Washington is decidedly the greatest man on that floor."

23. The testimony which Thomas Jefferson bore of Washington's character.

Thomas Jefferson, his rival, said of him: "His mind was great and powerful without being of the first order; his penetration strong though not so acute as that of a Newton, a Bacon, or a Locke. His judgment was ever sound; it was slow in operation, but sure in conclusion. He was incapable of fear. The strongest feature of his character was prudence, never acting until every circumstance, every consideration had been duly weighed. His integrity was pure, his justice inflexible. His temper was naturally irritable, but he had a firm and habitual control over it; but if, however, it broke its bounds, he was tremendous in his wrath." On the whole, he admitted, his character was correct and perfect; in nothing bad, in few points indifferent; and never did nature and fortune combine more perfectly to make a man great and to place him where he would be held in everlasting remembrance.

24. Weems, the biographer of many heroes and who was at one time rector of Mount Vernon parish, Virginia, says in verse, of Washington's life:

"A life how glorious to his country led!
Beloved while living, as revered now dead;
May his example virtuous deeds inspire;
Let future ages read it and admire.

"A life how useful to his country led!
How loved while living, how revered now dead;
Lisp! lisp his name, ye nations yet unborn!
And with like deeds your own great name adorn."

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

365. Is reduction in computation a convenience or necessity, etc.?

In operating with numbers of different names, reduction is always necessary, and every necessary operation is a convenience. No two or more numbers of any different names can be added, subtracted, or compared without reducing them to the same name. The failure to fully understand this last statement is the chief reason why so much attention is devoted to teaching arithmetic.

366. Has the invention of *percentage* added any to the scope of arithmetical computation?

Without attempting to explain the intended meaning of the word *scope*, I will say, *first*, that *percentage* is only the extended application of the *decimal system* of numbers, or the dividing of the unit into a *hundred equal parts*, as well as tenths; and it has therefore given us another modified method of computation, based on the decimal system; *second*, it has furnished a convenient method of arithmetical comparison in our business operations.

Z. RICHARDS, Washington, D. C.

367. How long must a rectangular piece of land be, containing 3 acres, if its width be $\frac{1}{2}$ of its length?

Three acres contain $160 \times 3 = 480$ square rods. As the length is five times the width, there will be five equal squares, whose sides will equal the width of the rectangle; therefore $\sqrt{480} =$ one of these sides, and $5\sqrt{480} =$ the longest side.

Z. RICHARDS, Washington, D. C.

Credit to Robt. L. W., Cable, Ill.

368. Given the contents of a rectangular solid and two of its dimensions; required the third.

Let a equal the known contents, and b and c the two known dimensions, and x the unknown; then $x = \frac{a}{bc}$.

Z. RICHARDS, Washington, D. C.

369. Adding the same number to both terms of a fraction produces what effect upon its value? Why?

The *proper fraction* is increased in value, because the number of parts, or fractional units used as a numerator, is increased, while the size of them is diminished. The *integral fraction* (as $\frac{5}{2}$) is not changed in value by adding the same number to each term; as, $\frac{5}{2} + \frac{2}{2} = \frac{7}{2}$. The *improper fraction* is diminished by the same operation, because the number of parts used is not increased in the same ratio as the size of them is diminished. Illustrated thus:—

$$\frac{5}{4} + \frac{2}{4} = \frac{7}{4}, \text{ and } \frac{5}{4} \text{ compared with } \frac{7}{6} = \frac{30}{24} \text{ and } \frac{28}{24}.$$

Z. RICHARDS, Washington, D. C.

370. Required to add $\frac{1}{4}$ to $\frac{3}{8}$, and to multiply $\frac{3}{8}$ by $\frac{1}{4}$. Explain fully why in one case it is necessary to reduce to a common denominator, and not in the other.

It must always be borne in mind that no fraction can be added, subtracted, multiplied, divided, or compared with another fraction, without reducing them to a *common name*,—a process essentially prerequisite in using each of the four arithmetical operations. But in reality no number can be multiplied by *unity*, or by any number *less than unity*; for to multiply means to *increase*.

Illustrations. $\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8} = 1\frac{1}{8}$. Again, $\frac{3}{8} \times \frac{1}{4}$ is equal to taking $\frac{1}{4}$ of $\frac{3}{8}$. The common denominator is 24, and $\frac{3}{8} = \frac{9}{24}$. Now $\frac{1}{4}$ of $\frac{9}{24} = \frac{9}{96} = \frac{3}{32}$, which $= \frac{3}{8} \times \frac{1}{4}$, by the short rule. So, also, if we divide $\frac{3}{8}$ by $\frac{1}{4}$, we get the fractions to a C. D. and divide one numerator by the other; thus, $\frac{3}{8}$ and $\frac{1}{4} = \frac{3}{8} \div \frac{1}{4} = \frac{3}{8} \times \frac{4}{1} = \frac{12}{8} = \frac{3}{2}$, which $= \frac{3}{8} \times \frac{4}{1} = \frac{12}{8}$, by the short rule. IDRM.

- 371. In a mill are employed men, women, and boys. Men work 12 hours a day and receive 6 cts. per hour. Women work 9 hours a day and receive 4 cts. per hour. Boys work 8 hours a day and receive 3 cts. per hour. As often as all the men earn \$24, all the women earn \$10, and all the boys \$5. There are 59 employed. How many are men? how many are women? how many are boys.

Each man receives 72 cts. per day; each woman receives 36 cts. per day; and each boy 24 cts. per day.

It will take ($\$24 \div .72 = 33\frac{1}{3}$) $33\frac{1}{3}$ men one day to earn \$24.

$27\frac{1}{3}$ women ($\$10 \div .36 = 27\frac{1}{3}$) one day to earn \$10, and

$20\frac{2}{3}$ ($\$5 \div .24 = 20\frac{2}{3}$) boys one day to earn \$5.

Now, to get the proportion, $33\frac{1}{3} + 27\frac{1}{3} + 20\frac{2}{3} = 81\frac{1}{3}$. Number working 59.

$\frac{33\frac{1}{3}}{81\frac{1}{3}}$ of 59 = 24, number of men employed.

$\frac{27\frac{1}{3}}{81\frac{1}{3}}$ of 59 = 20 " women "

$\frac{20\frac{2}{3}}{81\frac{1}{3}}$ of 59 = 15 " boys "

G. O. McMILLEN, *Cherokee, Kans.*

Credit to Robt. L. W., Cable, Ill.

Solution by Algebra.

Let x = number of men employed for 12 hrs. at 6c. per hour.

y = " women " " 9 " 4c. "

and z = " boys " " 8 " 3c. "

Then $x \times 12 \times 6 = 72x$ = earnings of all the men one day.

$y \times 9 \times 4 = 36y$ = " " women "

and $z \times 8 \times 3 = 24z$ = " " boys "

While $\frac{2400}{72x}$ = number of days required by men to earn \$24.

$\frac{1000}{36y}$ = " " " women " \$10.

and $\frac{500}{24z}$ = " " " boys " \$5.

Now, according to conditions of problem,

(1) $x + y + z = 59$,

(2) $\frac{2400}{72x} = \frac{1000}{36y}$, and (3) $\frac{2400}{72x} = \frac{500}{24z}$.

Clearing (2) of fractions and dividing result by 86400, gives

(4) $y = \frac{5x}{6}$.

(5) $z = \frac{5x}{8}$.

Substituting (4) and (5) in (1), clearing the equation of fractions, uniting terms, and dividing by 59, gives

$x = 24$ = number of men.

$y = \frac{5x}{6} = \frac{5 \times 24}{6} = 20$ = " women.

$z = \frac{5x}{8} = \frac{5 \times 24}{8} = 15$ = " boys.

SUSAN F. SPRAGUE.

CORRECTIONS.

Mr. Editor:—In the October TEACHER is the question, "Which is the longest word in the English language?" and the answer given is, "Incomprehensibility." In the Dictionary I find words of the same number of letters; so it cannot be the longest in that way. Then I find words with a greater number of letters, but with less syllables, and so on. Can you state in what way it is the longest?

ELVIRA M. P., *Clark's Falls, Conn.*

Mr. Editor:—No. 318 was answered in the October TEACHER by P. B., Washington C. H., Ohio, as "Incomprehensibility." This is not the longest word in the English language. "Disproportionableness" is the longest classified English word.

ALVANO C. G., *Lisbon Falls, Me.*

QUERIES.

398. What language is spoken in Western Ireland? In Dublin, St. Petersburg, Athens, Naples, Venice, Geneva, Brussels, Amsterdam, Vienna, Berlin, Berne, Christiana, Stockholm, Copenhagen, Amsterdam, Paris, Edinburg, Lisbon, New Orleans.

399. Was Henry VIII. of England a competitor for the imperial crown of Germany with Francis II. of France and Charles II. of Spain? Robertson's *Charles V.* gives him as an aspirant. In case of success, what would have been Henry's title? Francis's?

400. Women were allowed to vote in one state, ninety years ago. Which was it?

401. What are the principal causes of rain and why is it rain never falls in some parts of the earth?

402. What is the annual income of Queen Victoria?

403. Explain Bode's Law.

404. How do plants, eat, drink, and digest?

405.

LITERARY ENIGMA.

I am composed of 93 letters, and am a stanza from a very popular poem.

My 24, 3, 81, 38, 49, 83, 56, 68, 9, 69, 26 is the title of one of Judge Tourgee's books.

My 1, 15, 50, 78, 11, 70, 60, 85, 64, 7, 5, 66 was written by Charles Dickens.

My 10, 44, 37, 43, 13, 65, 46, 93, 53, 73 is the author of my whole.

My 47, 18, 33, 2, 26 was a very ancient poet.

My 22, 12, 30, 88, 51, 42, 32, 25, 47, 35, 84, 71, 40, 43, 28, 57, 62 is one of Mrs. A. D. T. Whitney's books.

My 73, 52, 15, 39, 58, 35, 21, 31 is an American poet.

My 4, 60, 73, 18, 31, 26, 89, 33, 17, 19, 29, 87, 63, 52, 45, 11, 8 is an American clergyman and author.

My 19, 2, 80, 33, 74, 20, 73, 15, 37, 82, 11, 34 was a Dutch colonist whose adventures are related by Washington Irving.

My 92, 64, 79, 67, 1, 55 was the name of the wife of John Halifax, Gentleman.

My 61, 41, 28, 14, 31 is one of the legendary kings of Britain, and the father of Arthur.

My 38, 91, 93, 40, 76, 54, 6 is one of the characters in Shakespeare's "Comedy of Errors."

My 86, 10, 77, 73, 29, 68, 59, 3, 80, 53, 70, 72, 75 is a title conferred upon Chaucer by his contemporaries.

My 16, 23, 55, 27, 15, 67, 90, was a Roman poet who flourished in the first century A. D.

WASHINGTON.

BY M. V. GORMLEY.



FATHERLAND, so great and free!

The prize that valiant heroes won,

The joyful harp we tune to thee

Commemorates thy noblest son;

To him we give our thoughts to-day;

A thankful, childish, patriot band,

We twine the laurel and the bay

And crown him, Father of our land.

O not like proud Ambition's son

That soared to fame in ancient Rome;

Not like the Mars, who battles won

And found Helena for a home;

No chains were forged thy name to raise

Above the legal lords of earth;

No groaning captives sang thy praise

Or flattered crimes to deeds of worth.

Sleep on in peace, O hallowed shade!

Sleep on the father of the free!

The trees that guard the southern glade,

Their gentle sobs are all for thee!

The oak that decks our northern vale

And boldly braves the drifting snows,

Through summer calm or winter hail

Shall teach defiance to thy foes.

THE KINDERGARTEN.

IN modeling it is often necessary to divide solids formed, and as it is almost an impossibility for the children to cut with string or wire, and rather difficult for a teacher to attend to each child separately, a very good means of dividing the form may be introduced by placing in each pupil's hands a three-inch long splint, which, pressed firmly down and through the clay, cuts with tolerable smoothness.

CONUNDRUM spelling lightens a Friday afternoon lesson, and may be developed thus: The teacher, having in her mind a list of words, beginning with a certain letter says, "I'm thinking of a word beginning with *a*." In turn the pupils reply by asking if it be a certain word, which they of course spell. When the correct word is given it is written upon the blackboard. Lists of words having the same root formation, or similar prefixes, or suffixes, are developed in the same way.

HERE AND THERE.

BY M. E. C.

THOROUGHLY believing in learning through doing we turned into account the last hour of a dreary, dark day by developing a lesson on color, thus saving any strain upon the eyes that might have occurred from using the regular school material,—books, slates, papers, and pencils. The exercise was conducted with that freedom so acceptable after a week's hard work, and the results were so delightfully satisfactory perhaps it will be suggestive to others to learn "just how" it was done. The pigments,—red, yellow, blue,—were brought out, while every one was being supplied with a half sheet of white "practice paper"; after the colors were recognized there was dropped upon each paper as much of the red pigment as could be taken upon the tip of a rather large knife-blade. This was smoothed with a white splint about four inches long until perfectly free of lumps, and then an amount of blue, similar to that of red, was dropped upon another part of the paper. This, too, was made smooth before it was mixed with the red. As soon as the dry-mixing was accomplished a few drops of water were added, and after a very thorough mixing a pretty creditable paint was then obtained. The children's pleasure was unbounded as the orange color came out strongly during the process. The remaining secondary colors were at a later period developed in the same way, and we feel confident no child will be unable to recognize these, or any colors, after actually working with them. It creates, besides, so great an enthusiasm that more children remember to bring duplicate colors, in various materials, to increase the school collection of colors.

The "Scheme for Study" indicated the fact that certain measures should be developed, explained, and applied; consequently before the period for playing store arrives we direct the slate to be arranged with the longest direction from back to front. A foot ruler is next laid across the slate, and a line drawn having exactly the same length. The children are led to notice both the markings and figures breaking the surface of the measure, before the lengths which they indicate are duplicated upon the line. Any length longer than one foot,—a yard, for instance,—is represented by a line upon the blackboard, to which in turn the children apply either an inch or foot-long stick, as the requirements of the particular lesson necessitate, taking care to mark off each application at the right of the top of the stick rather than above. When the long line has been divided the number of divisions is counted, and the class *knows* that so many inches, or feet, make the yard. Afterward, as busy work, sentences denoting these values may be prepared upon slates or papers, or very narrow lengths of wrapping paper may be marked off into inch or foot lengths, or both. These child-made measures, if taken home, will afford much amusement as well as instruction, for the small owners will attempt to measure all sorts of objects, gaining in consequence a notion of much that would otherwise remain unnoticed.

Orderliness is just as necessary in the coat-room as in the schoolroom, and as there are always some pupils seemingly devoid of any sense of order, it is a capital idea to assign a certain hook to each child, making him responsible for its care. A few words explaining the manner of hanging the coat or cloak upon the lower part of the hook, and the hat or hood upon the upper, will not be amiss. If, perchance, hooks are not numbered it is a simple matter to place above them chalk figures, or those cut from an old calendar. At any cost of time and trouble insist upon tidy coat-rooms, and the child, once or twice reprov'd, will eventually learn to be careful to place his clothing where in-filing pupils cannot trample upon it. Some children learn a rare lesson in economy and ways and means of abusing money values by being told their clothing "costs money," and when ruined through their carelessness must be replaced by money which should have been used for something else.

Another sort of order, which is of considerable importance in a child's training, is that of keeping the "house," or desk, tidy. If the child is taught to carefully pack up the contents of his desk at the close of each session, one step toward orderliness in future business-life, or home-making, has been taken.

There are so many, many children in this great world combining the incapacity to follow directions and lack of tact in execution, it is an excellent idea to introduce a systematic scheme of "helping the teacher." Certain little folks may be directed to distribute or collect material

on one day and another set on another day, or particular work may be given various children to do,—for instance, the most careless child may be chosen to dust the tables and mantel, which work will necessitate the careful moving and cleansing of various articles of bric-a-brac; the particularly thoughtless, if given the care of the plants for a week, will surely profit from the service. Through these little “by-plays” two results are positive to be gained,—one the power to follow directions, and the other to execute in an orderly manner.

A teacher being extremely annoyed by the finger-snapping prevalent in her new class, adopted the following means of breaking the habit. When a finger-snapping occurred she looked very much astonished, and inquired where the dog was which the child seemed to be calling, and added, as if in a quandary, “We only snap our fingers at dogs, but I see no dog here.” Shortly the finger nuisance became a thing of the past. This same teacher, being obliged to overcome a habit,—possessed by the same class,—of emphasizing the fact of a need for her attention by making a species of grunt, resorted to the clever means of exclaiming in a frightened tone, “Oh! I’m afraid of engines; I cannot go near them for fear of accident.” This class also being unusually noisy of movement their clever teacher suggested that horses were very noisy when they moved because of various reasons, and she wondered if horses had come into her room; if so she would be obliged to have some one take her place, as she was not accustomed to the management of such creatures. The children were simply carelessly clumsy, and this notion soon settled the difficulty.

WASHINGTON’S BIRTHDAY.

BY LUCY WHEELLOCK.

THE birthday of the “Father of his Country” must be celebrated in the kindergarten, as we are to train our children to be patriotic citizens. What shall we do? In the first place visit Baird, on Essex street, and secure some of his paper figures of Washington in Continental costume, one for each child, if possible, to carry home as a souvenir. This will introduce the conversation of the morning about the man, his time, his deeds, and his service to the country. Pictures of Mt. Vernon, and others, illustrating different incidents of Washington’s life may be found in histories and biographies, which furnish a basis for an outline of his career, not forgetting the famous cherry tree anecdote, which almost every reading-book contains.

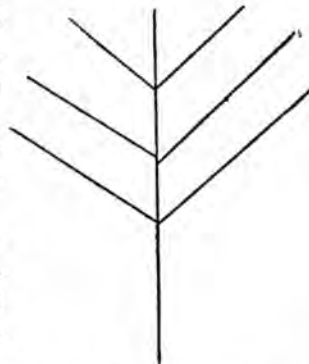
Children are not prone to be iconoclasts, and believe implicitly in the little hatchet, as everybody should. *America* has previously been taught, and this is the hymn for the day. One poor child was so impressed through

this hymn by the idea of her country, that when she was taken to West Roxbury Park she exclaimed in delight: “Here is my country, ’tis of thee!”

For work at the table, the little ones are furnished with bundles of sticks for illustrating the stories told earlier in the day.

The first thing is the cherry tree, which is made from direction, and looks like this.

One child with a realistic mind wished to put inch sticks at the foot for roots, and red circles on the branches for cherries.



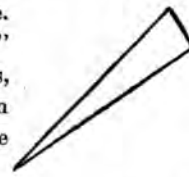
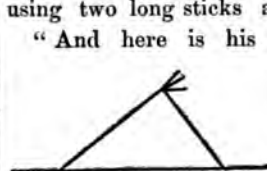
Next comes the hatchet, for which there are various models, this one being chosen finally.

Some children have seen the Washington elm in Cambridge, and after some discussion as to the comparative size of an elm and a cherry tree, it is decided to take a five-inch stick for the trunk of the elm tree and put four branches on each side. A red stick placed near the trunk represents Washington as he stood to take command of the army.



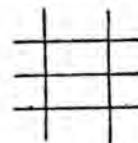
Robert wishes to make his sword, which is done by using two long sticks and a short one.

“And here is his soldier cap!” cries Curtis, who has been admiring the cocked hat.



Washington’s house, at Mt. Vernon, is last represented, and the gate.

Marching games are in order on this day, and,—



“Soldier boy, soldier boy,
Where are you going,
Bearing so proudly your knapsack and gun?”

“I go where my country,
My duty is showing,
Bearing so proudly my knapsack and gun.”

Then each child is given a little flag, and as the line marches around the room, waving the tiny banners, the teacher sings,—

“Color boy, color boy,
Where are you speeding,
Waving your banner of red, white, and blue?”

“I go where my country
My service is needing,
Waving my banner of red, white, and blue,”

answer the children in glad chorus.

As a closing occupation the flag is again introduced

the stripes counted, and the position of the stars noted; then each child is given a sheet of white paper to make a flag. This is done either by painting or by pasting on strips of red paper, such as are used for the weaving, and a blue square on which are pasted tiny gold stars, which may be bought in sheets at fancy stores. The flag is finished by pasting to a splint for a flag-staff, and each child carries his home with, perhaps, a dawning love for his country and its flag.

FROEBEL'S PRINCIPLES AND THEIR PRACTICAL APPLICATION.

BY FLORENCE CLAP, BALTIMORE.

HIS second gift consists of a ball, cube, and cylinder, made of wood. Different material produces new experiences. This ball is hard. The outlines of the cube differ essentially from the ball. The cylinder partakes of the appearance of both ball and cube. There are in the cube well-defined outlines and angles. Contrast is again detected. There is the contrast of form, texture, motion. The cube will slide but not roll, the cylinder will slide and roll. The cube will stand solidly but in one position. All these differences the child observes. The contrast of the straight line with the curved is at once perceived.

And while we look to the straight line for mathematical precision, we turn to the curved line for all the elements of beauty. This perception can be emphasized by drawing the child's attention to a tree. The tree is an idealized representation of a straight line. Its branches grow in various degrees of inclination. The angles may not be so exact as the geometrician's, yet they are angles. The network of veins on the leaves forms distinct angles. But as nature completes all things with rarest art, the edges and shape of most leaves possess all the beauty of the curved line. The twisting and curving of the branches and twigs fulfill a law of graceful adaptation of the exact with the æsthetic. As we are considering the work of the Divine artificer we find perfection, and man has long since gone to the forest for his most ennobling and uplifting architectural form, and most appropriately has used it to build places of worship, where the pointed arch with its sculptured tracery of enrichment draws the eyes and thoughts heavenward.

Thus the law of contrast introduces the child to an exact knowledge of form and its relations.

The same method of representation by flat surfaces and outlines can be applied as in the use of the soft ball. Beads, cubical and cylindrical, can be obtained, and a new use can be made of the paper representations of the ball and cube. The child can paste these forms with regularity on cardboard, and make figures of beauty.

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For instance, a blue cube can receive four red balls,—one on each side,—and great variety can be given to the child's occupation in this way, developing its ingenuity, and giving it an opportunity of self activity, suitable to its age. There are also songs to add interest to this second gift.

Froebel's third gift places still greater power within the child's grasp, and furnishes the kindergartner with increased facility for aiding the child's expression of its wants and meaning. This third gift is a large cube, divided once in each dimension, namely, in height, length, and breadth, into eight equal parts.

We all know how children love to construct. They eagerly seize upon any material that will create a house for their doll, a stable for their horse. They will try to represent anything they have seen, investing the wholly

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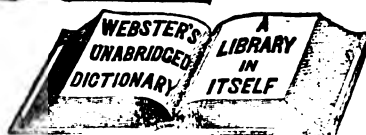
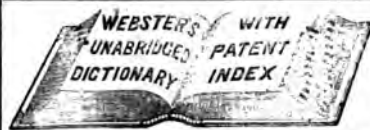
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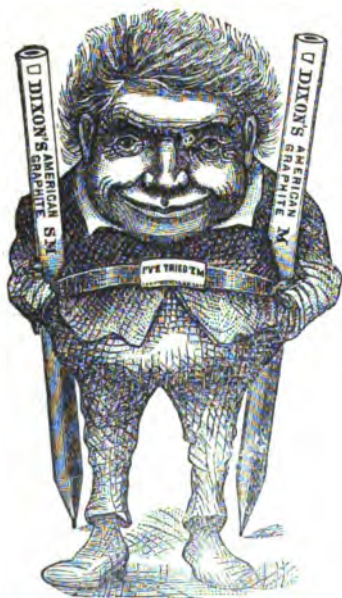
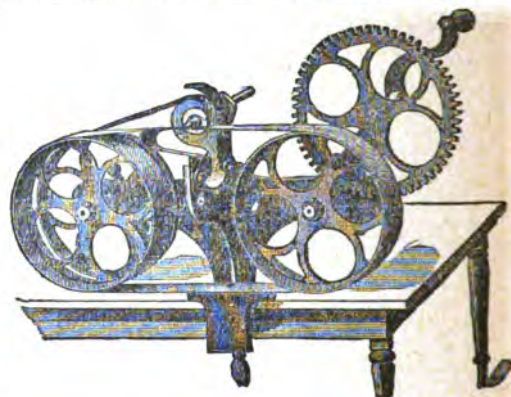
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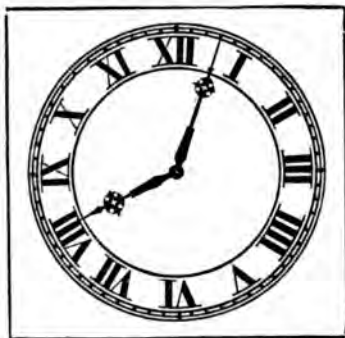
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The full-grown man who can resist the temptation to slide over a half-a-yard of glare ice on the side-walk as he is going to business, may possibly be born about the middle of the next century.

A fellow never has experienced all the joys of camping out unless he has had one of those telescopic drinking-cups shut up on him just as he is handing to a young lady a cup of scalding hot coffee.

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Big books of synonyms have been compiled, showing the wonderful richness and variety of the English language; but of all the wealth of words they give, when a young dandy slips on a bit of ice and sits down in the slush just as the prettiest girl he knows is bowing to him from her parlor window, there is only one that is exactly suited to the occasion.

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A LANGUAGE LESSON.

BY WARREN WINTHROP.

TEACHER.—I want the class to give me a name for this picture. Each of you may write the title of a story you could tell me about this picture. You may have two minutes to look at the picture and two minutes to think about it, and two minutes to write the title.

The teacher holds her watch, and says, "Observe"; after two minutes, "Think"; after two more, "Write."

From these titles she writes upon the blackboard,—

"Susie's Fun."

"A Naughty Little Kitten."

"Fannie's Pets."

"The Wee Puppies."

"Fun in the Woodshed."

"Cats and Dogs."

"The Puppies' First Caller."

"A Surprised Cat."

"Bare Armed Josie."

"Nettie Loves Puppies better than Flowers."

"The Frightened Puppies."

"Out in the Barn."

Teacher.—Now you may write the names of all the things you can tell me about in this picture, and I will write as you tell me, but no one must tell of anything that any one else has told about, and it must be only one thing, and what you are going to tell about that one thing. Do you know just what I mean?

Pupil.—Are we to tell you about it now?

Teacher.—How many think so? (No one but the inquirer.) Why did you ask? (to the pupil.)

Pupil.—Because you said we were to tell what we were going to tell about the thing.

Teacher.—What did I mean?

Another Pupil.—That we should say something more than that we were going to tell about the little girl.

Teacher.—How many think that was my meaning? (All hands up.) Now for your answers.

UPON THE BLACKBOARD.

What the kitten is thinking about.

About the high-headed puppy's face.

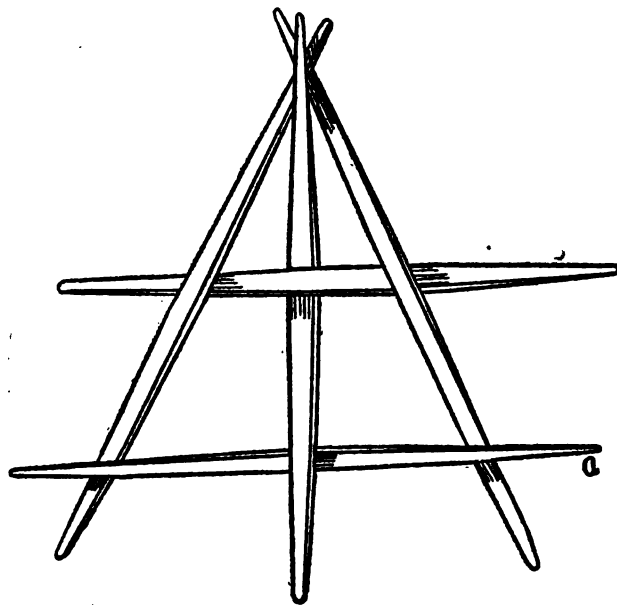
Why Carrie dropped the flowers.
 How the puppies got upon the tub.
 What will the kitten do?
 Why doesn't the littler puppy hold up its head?
 Where the little girl's hat is.
 The floor of the shed.
 The little girl's hair.
 Why cats don't like dogs.
 What kind of puppies these are.
 That barn broom.

Teacher.—Now each of you may select one of these things that he did not give me himself, and write three things about it, and when I say "change," then you may hand it to the scholar in front of you; those in the front row passing theirs to those in the rear row, and after reading what has been written he may write three more things about the same subject and then change as before; and after reading the six, write three more. Then we will have some of them read as a whole.

A MINIATURE EARTHQUAKE.

BY GEO. W. COLEMAN.

WE can imagine a teacher saying to her class, after, having read the following paragraphs: "Now, children, this is Monday morning and a splendid time to make good resolutions. Let us try to go through the week



without being obliged to put down a single tardy or absent mark resulting from negligence, carelessness, or any other fault. Of course we will not count those occasioned by others' faults. Then, when Friday afternoon has come, and if you have made a good record, I will give you an illustration of an earthquake on a small scale."

Imagine, if you can, how this would pique the curiosity of a class of children just reading in their geography, for

the first time, a description of an earthquake. How their little minds have worked attempting to grasp the idea of an earthquake! What conjectures they would form concerning the promised illustration! How could it help stimulating regular attendance and punctuality?

The following is what the teacher had in mind when she made the promise:

Weave together five stout toothpicks as indicated in the cut. Lay the figure thus formed on a large tin tray or a platter, and cover it lightly with fine, dry sawdust, being careful to leave exposed the end marked *a*. The surface will naturally be quite irregular, and can be made more so very readily if one desires to represent the earthquake as occurring in a very mountainous region. With bits of charcoal represent cities and rivers. Further elaborations will suggest themselves to a wide-awake teacher. When all is ready, apply a match to the uncovered end,—lo, and behold, all is chaos, and that, too, in the twinkling of an eye. By the use of fire the illustration is made more perfect, for the children have learned that the center of the earth is a ball of fire, a supposition furnishing a basis for at least one theory concerning the origin of earthquakes.

Many variations of this idea are possible. Instead of sawdust use light bits of paper, and term the exhibition a home-made pyrotechnical display. If the teacher wishes to picture an upheaval of a larger tract of territory than this combination of little sticks could possibly represent, and thus render it easier to indicate topographical features, he has only to secure larger sticks, use more sawdust, and expend a greater amount of pains.—*Jour. of Educat'n.*

AUTOGRAPH ALBUM VERSE.

BY W—P.

IT is an easy matter for teachers to be finical in most things that pertain to their pupils' amusements or diversions. We are too apt to forget the impulses that stirred us when children, and to place a severe judgment on those acts and expressions that, in our riper judgment, strike us as being supremely silly and uncalled for. It may be that we often err in our opinions; every year we find occasion to readjust our former decisions on matters that are practically of small moment, but we like to be supreme in our contempt for the frivolities of youth. There are, however, some decisions we never have need to reconstruct, and one of these "unreconstructibles" is reference to the "sentiments" connected with the name written in the so-called autograph albums. Every year, there is the time for writing our names in these albums, and every year, in looking through these books, do we find the same old "sentiments" with the name of a school-mate tagged on after them. These verses or epigrams are invariably nauseating in their sentiment and expression, and the writers of them are always ashamed of having

given them room on the same page on which they wrote their names.

From an album that lies before me, I cull some of these choice but time-worn intellectual mosaics :

"Let our love forever be
Hot as a cup of ginger tea."

"When you are old and cannot see,
Put on your specs and think of me."

"These few lines, brief and solemn,
Are put here to end the column.
Get wealth and wisdom if you can,
But be sure and get a nice young man."

"When this you see, as I hope you will,
Remember your friend who wrote up hill."

"Remember me when fast asleep,
Remember me when wide awake,
Remember me on on your wedding day,
And send me a slice of your wedding cake."

"Some write for honor.
Some for fame;
I only write to
Sign my name."

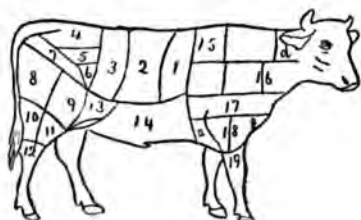
"If you love me as I love you
No knife can cut our love in two."

"In the wood-box of your affection
Regard me as a stick."

"When you are married
And your old man cross,
Come over to my house
And eat apple-sauce."

There are others in the book of the same high order of poetic fervor and expression, but these will serve to show the nature of all. It is worth while to call the attention of pupils to the puerility of these verses and to recommend their assignment into the limbo of disuse.

THE ANATOMY OF A BOVINE.



- | | |
|---------------------------|--|
| 1. Tip of sirloin. | 12. Shin. |
| 2. Middle of sirloin. | 13. Boneless flank. |
| 3. First cut of sirloin. | 14. Thick flank, with bone. |
| 4. Back of rump. | 15. First cut of ribs (a, chuck ribs; d, neck). |
| 5. Middle of rump. | 16. Rattle rand. |
| 6. Face of rump. | 17. Second cut of rattle rand. |
| 7. Aitch bone. | 18. Brisket (a, the navel end; b, the butt end). |
| 8. Lower part of round. | 19. Fore shin. |
| 9. Vein. | |
| 10. Poorer part of round. | |
| 11. Poorer part of vein. | |

NUMBERS ABOVE TEN.

BY ANNA B. BADLAM.

Lesson III. — The Number Thirteen.

I. Slight work.

a. Oral Expression: Ten and three are thirteen; three and ten are thirteen; three from thirteen will leave ten; ten from thirteen will leave three.

b. Written Expression:
 $10 + 3 = 13$; $3 + 10 = 13$; $13 - 3 = 10$; $13 - 10 = 3$

II. Slight work.

a. Oral Expression: Two 5's and three are thirteen; three and two 5's are thirteen; three from thirteen will leave two 5's; two 5's from thirteen will leave three.

b. Written Expression:
 $\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array} + 3 = 13$; $3 + \begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array} = 13$; $13 - \begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array} = 3$; $13 - 10 = 3$

III. Slight work.

a. Oral Expression: Five 2's and three are thirteen; three and five 2's are thirteen; three from thirteen will leave five 2's, five 2's from thirteen will leave three.

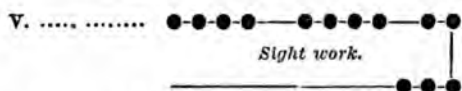
b. Written Expression:
 $\begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array} + 3 = 13$; $3 + \begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array} = 13$; $13 - \begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array} = 3$; $13 - 10 = 3$

IV. Slight work.

a. 1st Oral Expression: Nine and four are thirteen; four and nine are thirteen; four from thirteen will leave nine; nine from thirteen will leave four.

b. 1st Written Expression:
 $9 + 4 = 13$; $4 + 9 = 13$; $13 - 4 = 9$; $13 - 9 = 4$
c. 2d Oral Expression: Three 3's and four are thirteen; four and three 3's are thirteen; four from thirteen will leave three 3's; three 3's from thirteen will leave four.

d. 2d Written Expression:
 $\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} + 4 = 13$; $4 + \begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} = 13$; $13 - \begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} = 4$; $13 - 9 = 4$



a. 1st Oral Expression: Eight and five are thirteen; five and eight are thirteen; five from thirteen will leave eight; eight from thirteen will leave five.

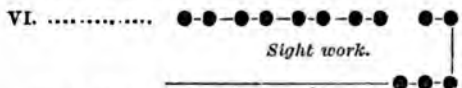
b. 1st Written Expression:

$$8 + 5 = 13; 5 + 8 = 13; 13 - 5 = 8; 13 - 8 = 5$$

c. 2d Oral Expression: Two 4's and five are thirteen; five and two 4's are thirteen; five from thirteen will leave two 4's; two 4's from thirteen will leave five.

d. 2d Written Expression:

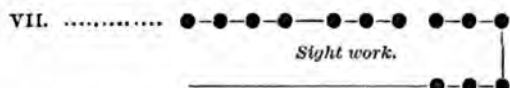
$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} + 5 = 13; \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} + 5 = 13; 13 - \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} = 5; 13 - \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} = 5$$



a. Oral Expression: Four 2's and five are thirteen; five and four 2's are thirteen; five from thirteen will leave four 2's; four 2's from thirteen will leave five.

b. Written Expression:

$$\begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array} + 5 = 13; \begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array} + 5 = 13; 13 - \begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array} = 5; 13 - \begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array} = 5$$



a. 1st Oral Expression: Seven and six are thirteen; six and seven are thirteen; six from thirteen will leave seven; seven from thirteen will leave six.

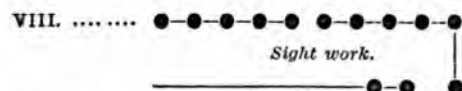
b. 1st Written Expression:

$$7 + 6 = 13; 6 + 7 = 13; 13 - 6 = 7; 13 - 7 = 6$$

c. 2d Oral Expression: Seven and two 3's are thirteen; two 3's and seven are thirteen; two 3's from thirteen will leave seven; seven from thirteen will leave two 3's.

d. 2d Written Expression:

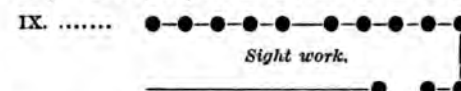
$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} + 7 = 13; \begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} + 7 = 13; 13 - \begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} = 7; 13 - \begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} = 7$$



a. Oral Expression: Eleven and two are thirteen; two and eleven are thirteen; two from thirteen will leave eleven; eleven from thirteen will leave two.

b. Written Expression:

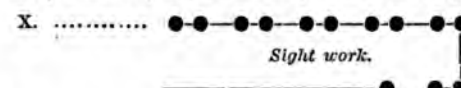
$$11 + 2 = 13; 2 + 11 = 13; 13 - 2 = 11; 13 - 11 = 2$$



a. Oral Expression: Twelve and one are thirteen; one and twelve are thirteen; one from thirteen will leave twelve; twelve from thirteen will leave one.

b. Written Expression:

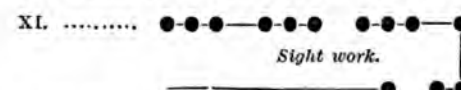
$$12 + 1 = 13; 1 + 12 = 13; 13 - 1 = 12; 13 - 12 = 1$$



a. Oral Expression: Six 2's and one are thirteen; one and six 2's are thirteen; one from thirteen will leave six 2's; six 2's from thirteen will leave one.

b. Written Expression:

$$\begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array} + 1 = 13; \begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array} + 1 = 13; 13 - \begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array} = 1; 13 - \begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array} = 1$$



a. 1st Oral Expression: Two 6's and one are thirteen; one and two 6's are 13; one from thirteen will leave two 6's; two 6's from thirteen will leave one.

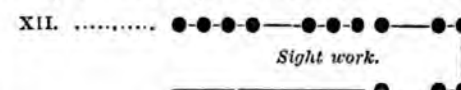
b. 1st Written Expression:

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} + 1 = 13; \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} + 1 = 13; 13 - \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 1; 13 - \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 1$$

c. 2d Oral Expression: Four 3's and one are thirteen; one and four 3's are thirteen; one from thirteen will leave four 3's; four 3's from thirteen will leave one.

d. 2d Written Expression:

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} + 1 = 13; \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} + 1 = 13; 13 - \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} = 1; 13 - \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} = 1$$



a. Oral Expression: Three 4's and one are thirteen; one and three 4's are thirteen; one from thirteen will leave three 4's; three 4's from thirteen will leave one.

b. Written Expression:

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} + 1 = 13; \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} + 1 = 13; 13 - \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} = 1; 13 - \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} = 1$$

MODERN METHODS IN ARITHMETIC.—(V.)*

BY A. E. WINSHIP.

17. Count by 3's from 3 to 36, and back. Have this practiced until they can do it as fast as they can speak, until the rhythm will have a permanent hold upon the mind.

With thoroughness, but not for such rapidity as in the last case:

Count by 3's from 1 to 22 and back.

Count by 3's from 2 to 23 and back.

Count by 4's from 4 to 48 and back until it can be done as fast as they can speak. This is the foundation of the "table" of 4.

One great thing to be accomplished in arithmetical work is absolute accuracy and reasonable ultimate rapidity in addition, subtraction, multiplication, and division.

Count by 4's from 1 to 29 and back; from 2 to 30 and back; from 3 to 31 and back. Do not seek great rapidity, as in the case of 4's, from 4 to 48, for the purpose is entirely different. It wants to be a *real addition* each time, and as soon as it ceases to be that, but a matter of memory, then stop. After they have added them mentally by counting them, have them write upon the slate and add as they write, writing first from the bottom up, and then from the top down. Then have them place the answer at the top, and subtract as they write.

Add. Subtract.	Add. Subtract.	Add. Subtract.	Add. Subtract.	Add. Subtract.
3 22	3 23	4 29	4 30	4 31
3 —	3 —	4 —	4 —	4 —
3 —	3 —	4 —	4 —	4 —
3 —	3 —	4 —	4 —	4 —
3 —	3 —	4 —	4 —	4 —
3 —	3 —	4 —	4 —	4 —
3 —	3 —	4 —	4 —	4 —
1 —	2 —	1 —	2 —	3 —
1	2	1	2	3

When they have added and subtracted these vocally, until they are accurate in their answers every time, then have them write each number as they have been speaking it, writing upward first, then downward, not saying anything as they write:

22	23	29	30	31
19	20	25	26	27
16	17	21	22	23
13	14	17	18	19
10	11	13	14	15
7	8	9	10	11
4	5	5	6	7
1	2	1	2	3

18. Having taught the measurements and practiced class with these additions, teach with little delay and use of objects:

Copyright, 1887.

$$9 + 4 = 13$$

$$8 + 5 = 13$$

$$7 + 6 = 13$$

$$9 + 5 = 14$$

$$8 + 6 = 14$$

$$9 + 6 = 15$$

$$8 + 7 = 15$$

$$9 + 7 = 16$$

$$9 + 8 = 17$$

There is no excuse for teaching other combinations. If the child has been well taught to this point it will do him good to use his brain in regard to the higher combinations. This is the limit of simple combinations.

19. Count by 5's from 1 to 31 and back; from 2 to 32 and back; from 3 to 33 and back; from 4 to 34 and back.

Use examples upon the board as in section 16.

Count by 6's from 6 to 72 and back, and learn it by heart. Count by 6's from 1 to 43 and back; from 2 to 44 and back; from 3 to 45 and back; from 4 to 46 and back; from 5 to 47 and back.

Use examples upon the board as in section 16.

20. Teach that each of the numbers multiplied is a *factor*. Be careful that they fully appreciate what a *factor* is, that they are in no danger of mistaking it for anything else.

Each child should then state what he thinks a *factor* is, and then each should criticise the others until they get the correct idea and are able to put it in words. Do not have them memorize any definition, but ask them frequently what a factor is, and let them state as best they can. Let it be a fresh thinking out of the statement until they know it so well that they do not need to so think.

In the same general way teach, when used, what the *multiplier*, *multiplicand*, *product*, *divisor*, *dividend*, and *quotient* are. No definitions are to be learned; no statement by the teacher is to be given; no special time is to be assigned for this teaching, but these six names are to be used and understood when the right time comes. There is no occasion at present to state what addition, subtraction, multiplication, division, subtrahend, minuend, or remainder is, and they need not be taught or used.

Teach:

$$2 \times 7 = 14$$

$$\frac{1}{2} \text{ of } 14 = 7$$

$$3 \times 5 = 15$$

$$\frac{1}{3} \text{ of } 15 = 5$$

$$2 \times 8 = 16$$

$$4 \times 4 = 16$$

$$\frac{1}{2} \text{ of } 16 = 8$$

$$\frac{1}{4} \text{ of } 16 = 4$$

$$2 \times 9 = 18$$

$$\frac{1}{2} \text{ of } 18 = 9$$

$$2 \times 10 = 20$$

$$4 \times 5 = 20$$

$$\frac{1}{2} \text{ of } 20 = 10$$

$$\frac{1}{4} \text{ of } 20 = 5$$

$$2 \times 11 = 22$$

$$\frac{1}{2} \text{ of } 22 = 11$$

$$2 \times 12 = 24$$

$$3 \times 8 = 24$$

$$4 \times 6 = 24$$

$$\frac{1}{2} \text{ of } 24 = 12$$

$$\frac{1}{3} \text{ of } 24 = 8$$

$$\frac{1}{4} \text{ of } 24 = 6$$

Explain and hereafter use the sign of division (\div) as signifying the same as the fractional expression.

$$5 \times 5 = 25$$

$$25 \div 5 = 5$$

$$3 \times 9 = 27$$

$$27 \div 3 = 9$$

$$4 \times 7 = 28$$

$$28 \div 4 = 7$$

$$3 \times 10 = 30$$

$$5 \times 6 = 30$$

$$30 \div 3 = 10$$

$$30 \div 5 = 6$$

$$4 \times 8 = 32$$

$$32 \div 4 = 8$$

A STUDY IN WORDS.

BY WINTHROP.

WHEN the newly rich Frenchman was astonished when he found that he had been talking prose all his life, he but expressed in his astonishment what a child feels when he comes to learn the same fact. Children are always interested in the tools of a craft, and the words they use are ever a source of interest to them. Nothing gives them keener delight than to find that some word has a meaning apart from the bald idea of which it is the medium of expression.

It is an excellent plan to make a study of some of the words which have in themselves a history, and explain these to a class as the words come into use. It matters little if the explanation be real or fanciful, it will serve its purpose, and that is to direct attention to the words of our language, awaken interest in their derivation, and create a love for their study. Take some of the common words, and tell the class the story of their life. Such works as *Rambles Among Words*, by Swinton; *Words and Their Uses*, by Grant White; *Americanisms*, by Bartlett, and others, will prove well-nigh inexhaustible to the clever teacher and furnish a source of pleasure to pupils. A few words are given to show what may be done by them by way of illustration.

SINCERE: Said to be derived from two Latin words,—*sine* without, and *cera* wax. It is related that the Greeks made fine vases, which, in workmanship and finish, surpassed any made by the best artists in other countries. It required many months, even years, to fabricate a vase, and when finished it was sold to the merchants of other nations for fabulous sums. The Romans were the chief purchasers of these Grecian vases. It would occasionally happen that when a vase which had cost months of labor was nearly finished, or in process of transportation, it would meet with a mishap, and a piece would be nicked out of it or a crack made in its side. Not to lose the labor already given to it, it was customary to fill the crack or mend the broken place with *wax*, which, being deftly colored, would harmonize with the rest of the vase and pass undiscovered by the purchaser. This "trick of the trade" was successful for a time, but it was eventually discovered, and then the would-be purchasers adopted the plan of submitting the vase to heat, when, if there was any concealed wax, it would melt and the fraud be exposed. From this it became customary to say that an uncracked vase was *sine cera*, without wax, and so by a natural sequence it became a habit of speech to say of a man who had a good reputation, a good character, who was whole-souled, honest, faithful,—that he was *sine cera*, sincere. This may be and may not be the true origin of the word *sincere*, but the story of it never fails to awaken a lively interest in the minds of children when it is told them. There are of course other legends connected

with the word, and any of them may serve as well as the one given above. Some other words with histories are "maudlin," derived from Magdalen; "tawdry," from St. Etheldred; "cat's cradle," from cratch cradle, the "cat" being a corruption of *cratch*, a rack into which hay was put for cattle, etc.

LESSONS IN LINES.

A STRAIGHT LINE, ———.

Hold a string tight and ask them to draw a line like it, shortest distance between two points. Have pupils name or point to the straight lines in the room,—edges of desks, doors, etc.

A *curved* line. Hold the string at each end so that it will sag. A line not straight but bending in all parts alike. Have pupils name or point to curved lines.

A *crooked* line. Draw such a line. A curving line that is not regular. Have them name or point to crooked lines.

A *vertical* line. (Explain that all lines are straight lines unless otherwise indicated.) One that is straight up and down, or one that is at right angles with the floor.

A *horizontal* line ———, one that is straight across, or one that is in all its parts the same distance from the floor.

An *oblique* line ———, a line that is neither horizontal nor vertical.

Parallel lines, lines that are everywhere the same distance apart, or lines that will not meet though produced indefinitely at either end.

Parallel curves, a series of two or more curves that satisfy the conditions mentioned in the case of parallel lines.

From these elementary lines combinations may be made as illustrated below, involving vertical parallels, horizontal parallels, oblique parallels, etc.



In each case, as shown in the first few paragraphs, have the pupils name or point to lines similar to those under discussion.

Do not get discouraged with the work that multiplies and magnifies itself.

MEMORY GEMS FOR FEBRUARY, 1888.

BY SUSAN TRUE, SALSBURY POINT, MASS.

WEDNESDAY, FEBRUARY 1ST.

GOD hears what we are saying now;
Oh, what a wondrous thought!
Our heavenly Father, teach us how
To love Thee as we ought.

THURSDAY, 2D.

It is pleasant to stand with the highest,
If only to share in their view;
To be friends with the best and the wisest,
But 'tis more to be honest and true.

FRIDAY, 3D.

Make us wise and make us good!
Make us strong for time of trial;
Teach us temperance, self-denial,
Patience, kindness, fortitude!
—E. R. Kane, 1820; *Mary Howitt*.

MONDAY, 6TH.

Waste not moments,—no, nor words,
In telling what you could do
Some other time; the present is
For doing what you should do. —*Phæbe Cary*.

TUESDAY, 7TH.

Joy and Temperance and Repose
Slam the door on the doctor's nose.
—H. W. Longfellow.

WEDNESDAY, 8TH.

Don't do right unwillingly,
And stop to plan and measure;
'Tis working with the heart and soul,
That makes our duty pleasure. —*Phæbe Cary*.

THURSDAY, 9TH.

Don't ever go hunting for pleasures,—
They cannot be found thus, I know;
Nor yet fall a digging for treasures,
Unless with the spade and the hoe!
—*Alice Cary*.

FRIDAY, 10TH.

Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.

MONDAY, 13TH.

With malice toward none, with charity for all, with firmness in
the right,—as God gives us to see the right,—let us strive on to
finish the work we are in.—*Abraham Lincoln*, 1869.

TUESDAY, 14TH.

In short, 'tis no better than thieving,
Though *thief* is a harsh name to call;
Good things to be always receiving,
And never to give back at all. —*A. Cary*.

WEDNESDAY, 15TH.

If you want to have riches,
And want to have friends,
Don't trample the means down
And look for the ends. —*A. Cary*.

THURSDAY, 16TH.

To conscience be true, and to man true,
Keep faith, hope, and love, in your breast,
And when you have done all you can do,
Why, then you may trust for the rest. —*A. Cary*.

FRIDAY, 17TH.

Don't just sit and pray
For increase of your store,
But work; who will help himself,
Heaven helps more.

MONDAY, 20TH.

All endearing cleanliness,
Virtue next to godliness,
Easiest, cheapest, needful'st duty,
To the body health and beauty.
Who that's human would refuse it,
When a little water does it?
—*Charles Lamb*, 1775; *Charles and Mary Lamb*.

TUESDAY, 21ST.

In speaking of a person's faults,
Pray don't forget your own;
Remember those in homes of glass,
Should never throw a stone.

WEDNESDAY, 22D.

Promote, as an object of primary importance, institutions for the
general diffusion of knowledge.—*George Washington*, 1732; *James
Russell Lowell*, 1819.

THURSDAY, 23D.

Do your best, your very best,
And do it every day,
Little boys and little girls;
That is the wisest way,

FRIDAY, 24TH.

Whatever work comes to your hand,
At home, or at your school,
Do your best with right good will;
It is a golden rule.

MONDAY, 27TH.

For he who always does his best,
His best will better grow;
But he who shirks or slights his task,
He lets the better go.

TUESDAY, 28TH.

What if your lessons should be hard?
You need not yield to sorrow;
For he who bravely works to-day,
His tasks grow light to-morrow,

WEDNESDAY, 29TH.

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.
—*Henry W. Longfellow*, 1807.

THE teacher is to shape the lives as well as the thought
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No. 8.

EASTER.

BY ANNIE M. LIBBY.

O Saviour, who for us didst faint and bleed,
For sinners, suffering in their hour of need,
While we remember Thou for us hast died,
Upon the cross wast foully crucified,—
To-day around the world the glad news goes,
'Tis Easter morn! This day our Lord arose!

Ring out, O bells, your happiest chime
To usher in this blessed Easter time;
O fair, white lilies tell with sweetest breath,
This day the Christ has triumphed over death,
And echoing round the world the glad news goes,
Rejoice, O earth, to-day thy Lord arose!

DAFFYDOWNDILLY.

BY ANNIE M. LIBBY.

The hoarse wind cried loud in the dark fir wood,
The fields looked sere and dead,
But daffodil lighted her golden lamp,—
"Spring's almost here," she said.

The sleepy pansies saw the yellow gleam
Shine down the garden aisle,
And hastened to open their velvet eyes,
To catch the spring's first smile.

And the crimson peonies came up red,
Blushing that they were late;
And the buds pushed out on the lilac tree,
Down by the orchard gate.

And the grass grew green, and the little creek
Sang forth so clear and strong,
The violet sisters came trooping out,
A purple-hooded throng.

And robin and sparrow began to build,
And daffy's lamp went out;
"For there's no use burning it now," she said,
"Since all have got about."

But they quite forgot they were loth to start,
"And I was first,"—"No, I,"
The birds and flowers quarrelling said,
But in a field hard by.

A dancing daisy for a moment stopped,
And shook her pretty head,—
"If 'twas not for daffodil's golden lamp,
Where would you be?" she said.

So maid of honor is daffy to spring,
And famed in song and rhyme,
For she set her golden lamp aflame
As soon as it was time.

KIP.

BY HELEN M. WINSLOW.

[A story the Schoolmaster told me.]

KIP was a troublesome scholar. He was dirty and brown and ragged. He had probably never been perfectly quiet for five consecutive minutes in his life; and his teacher had no end of trials with him.

She sent him up one day, I remember, to me. He came shambling into the office in a shame-faced way,—for, in spite of his many offences, he had never been up to the master's office before. His offence was a confirmed habit of stealing flowers. He stole them from the other children, from the teachers, through the palings of the neighboring fences, even from the blooming pots in the schoolroom windows.

It was in vain that his teacher had talked with him, had punished him, had bribed him. The boy uttered no word in self-defence or explanation, but yielded to temptation at every opportunity.

I talked kindly to Kip, and although his face kept its usual stolid reserve, I noticed that his brown, wizened hands moved uneasily in his ragged pockets.

"Why do you persist in doing so?" I asked, finally, in persuasive tones.

Kip looked me straight in the eye a moment.

"I does it for Mag, sir," he said, shifting uneasily from one foot to the other. "I have to."

"And who is Mag?" said I.

"She's my little sister," he went on in a low voice. "She's lame. We're poor, and Mag cries an' cries an' cries when I don't bring her no flowers. An' when I do, sir, she takes 'em in her thin white hands, an' kisses 'em an' holds 'em up close to her, like a baby, sir, an' then she goes to sleep an' forgits the pain. An' I'd rather take a dozen whippins', sir," he added, straightening his small body and looking me fearlessly in the face, "than see Mag cry 'cause I don't bring 'em."

"Why, my boy,"—it was all I could say,— "you should have told us before."

And then I promised to see that Mag should have her flower every day. And nearly every morning, before school, Kip came to me with "Mag's thanks," or "Mag's blessin'," and, at last, with Mag's hope that "the Heavenly Father would be as kind to the master as he had been to her."

This last message was delivered with some stumbling

and much awkwardness by Kip. Boys, especially boys of his stamp, do not enjoy such repetitions.

I meant to go and see Mag and find out what could be done for her lameness. But the school-year came to an end, and though I never, thank God, forgot her flowers, I had never seen her when I started away on my summer vacation. I was gone a month, and after my return some days elapsed before I heard from Kip. They had moved from one shabby tenement house into another; and I was disinclined, in those hot days, to hunt them up.

One morning, however, the door-bell was rung violently. I answered it myself, and saw one of Kip's mates standing on the door-steps.

"Kip's hurt. He wants to see the master."

I took the address of troublesome Kip, and the boy went away. I was very busy that morning, finishing an important paper on "Education for the Poor," and I waited until I had finished it and could post it on my way to see Kip,—troublesome boy!

It was ten o'clock when I reached the tenement-house, and climbed to the topmost floor. There I found him.

It was too late.

There was nothing left but a slight waxen figure on the miserable bed, with brown, but at last, clean hands, folded under the sheet. He had died an hour before, saying,—

"O, I wish I could see the master!"

"It was all for me," said poor deformed Mag, sitting white and helpless in a rude though comfortable chair. "I've been so selfish about the flowers. He was down to the market last night and saw a rose lying out on the street. He wanted to get it for me, sir. He ran out there, and then a big, heavy team came up, and Kip was found hurt. There is the rose, sir," and she pointed to a miserable, faded, withered flower in a broken teacup.

But to Mag the flower was more precious than the costliest hot-house rose could have been.

A month after, Mag died. Her fragile, half-starved frame gave way, at Kip's death, to the disease that had robbed her of her childhood.

Together, she and Kip have plenty of flowers now, and I think, I feel sure, that Kip—troublesome as he was—has seen the Master.

SCIENTIFIC COLLECTIONS: HOW MADE.

BY JULIA M'NAIR WRIGHT.

BEGIN in a humble way. Interest the children; have a shelf as long and broad as possible, cover it neatly with brown paper, utilize pasteboard boxes with divisions made of pasteboard, cover them with such stray panes of window-glass as can be secured; beguile some generous grocer into the gift of a glass-lidded raisin or honey-box or two, then set the children at work to fill these improvised cases. Teach them the *humanities* of

collecting, so that the nest of the sitting bird shall not be taken, and that only one egg shall be carried off from the nest full. Help the busy hands to make butterfly nets, and beetle-boxes; teach the quick and painless method of killing the specimen. As the collection grows richer weed out the poorer objects. Begin, begin, begin! Despise not the day of small things.

Soon the indifferent will be saying, "Why this is really very nice!" "Wonderful how the children are interested." "Astonishing how observing the youngsters are." "Curious how much they know about what I never thought of!" And the one shelf will grow to two or more; some good grandmother will present to the school her glass-front cupboard, or, the best trustee will take up a little subscription to buy glass cases. Such an enterprise is bound to grow if it is started enthusiastically and continued systematically.

II. In a small reader for children, I had illustrated an observation, by reference to some object of daily occurrence on the seashore.

"Well!" said a Western teacher to me, "that *would* be intelligible to a prairie boy or girl." No doubt the remark was just, and yet why should the prairie boy or girl be expected to be ignorant of the wonders of the shore? And why should the Cape Cod boy or girl be expected to be ignorant of grasses and flowers that are the growth of the prairies?

Is there a western school where neither teacher nor pupil, neither parent nor friend of either, has a correspondent or acquaintance at the seashore who could mail a box of those simplest treasures of the beach,—shells, dried crabs, sea-weeds, bits of coral and sponge?

Why cannot our schools, through the columns of the educational journals, institute a system of exchanges, like that now carried on in a number of magazines and papers, where A offers to give B seeds for roots, patterns for music, or books for scraps for crazy work? What has been efficient in one case no doubt would be in another. Schools might exchange the plants, shells, insects, minerals, and other natural curiosities of one *locale* for those of another. How easy, also, when the teacher or a pupil writes to a distant friend, even in foreign lands, to say, "Can you mail to me such and such an object?" secured, not by pecuniary outlay but by a little taking of thought, which will be a mutual pleasure to sender and receiver.

III. In our large towns and cities, where museums and collections are better understood and appreciated, the work of inaugurating a cabinet of specimens in natural history will be much easier. Some "true yoke-fellow" will be found to come to the aid of the teacher as soon as the subject is broached, and funds to purchase cases will be willingly supplied as soon as the effort is seen to be earnest and based on useful and scientific principles.

IV. The Brighton Museum of Natural History affords a good illustration of the splendid result of small united individual effort in a certain direction. For instance, it

has one of the finest exhibitions of wasp nests in the world, the fruit of the industry and interest of a single student who bequeathed his treasures to the museum. There is also a lovely collection of Australian moths and butterflies, gathered by a wandering son of Brighton; also a choice case of minerals collected in the immediate vicinity, and of agate, amethyst, pebble, aqua marine, and other stones secured along the south coast and cut and polished by craftsmen of Brighton.

It seems to me impossible that any school which energetically sets itself to secure a cabinet of specimens in natural history can fail of securing, in a very few years, an admirable result.

"MANNERS MAKE MAN."

BY A. N. EVERETT.

A NOTED LECTURER, invited to speak upon the manners and customs of certain savage tribes, began by saying, "Manners they have none, and their customs are beastly," — a wholesale denunciation which admitted of but little argument. If some unbiased and candid philanthropist were to speak upon the "Manners and Customs of American Children," he might easily say that their customs were based on evident conditions of freedom, plenty, and ease, but that among by far the greater number "manners" were conspicuous by their absence. And one need not be a graybeard, who has forgotten his own youth, nor the traditional spinster, nervous and hard of heart, to feel the lack. Under the present conditions of our social life, wherever are gathered a number of children between the ages of five and fifteen, wherever, in public or private, arises a question of their comfort, enjoyment, or ease as against the convenience of their elders, it is inevitably the latter who are to subside. The children sit while their elders stand; they interrupt and their elders keep silence; they confer few favors and return fewer thanks for those received; they use no titles to avoid being menial; they sit and stand in every posture of which the supple frame of youth is capable, and yawn loud and long if the proceedings do not divert them. Hospitality, age, deformity, or misfortune has no rights which they are bound to respect, and yet so complete is the state of subjection to which their elders are at present reduced, that often we hug our chains and applaud the young conquerors as they ride over us. "Boys will be boys!" sagely remarks some indulgent parent in extenuation, who will reap perhaps in his old age a harvest of indifference, neglect, or shame from the son whose inalienable birthright of liberty and free speech he allows to degenerate into license before the manly age of ten.

It is not well, however, to take gloomy views of any situation, and happily there is always, in pondering upon this one, the hope that our increasing wealth, which surrounds so many children from their birth with refining

influences, may gradually induce a gentler code of manners. Happily, also, there are some faint signs of progress already noticeable. If we can assume, then, that in regard to the manners of the young, the criticisms from at home and abroad, the gentle admonitions from the pulpit, essays from caustic pens, and parental wisdom have combined to awaken a revival of interest in the laws of courtesy, an appreciation of our deficiencies and a desire for improvement, is there any field more fertile in which to sow the good seed than the schoolroom? any place where one could better nourish, prune, and incline the growing manner? It is true that by far too many teachers have overlooked what might well be made a normal training course in courtesy of manner, but there are more yet capable of exerting an influence life-long in its refining and elevating tendency. In the public schools it is not merely a question of civility or polish, it is one of ethical value; it concerns the moral tone of a generation or of a community; a reason why no trifle should be overlooked. The law requires cleanliness of person and neatness of dress; let the teacher require also propriety and grace of posture. Compel children to show deference to their elders as you compel them by insistence and assistance to work out a problem in multiplication. Require your boys to lift their caps in passing, and interchange bows with your girls with all the grace and cordiality of which you are capable. Insist on the right of precedence of the girls and of all elders. Let no child loll or eat when talking with you. Encourage small sacrifices, one for the other. "I never made it an infringement of discipline when a child did *any* polite thing, however unconventional in the schoolroom," says the most refined and lovable woman, I know, who ever taught a school. "It is astonishing how easily, if only called forth by a strong will and magnetic power, the innate chivalry of a boy's nature can be awakened and kept alive."

EYES THAT SEE NOT.

BY BELLE P. DRURY, ILLINOIS.

ONE of the gravest defects in the education of country school children grows out of the neglect of the teachers to cultivate in their pupils habits of close observation.

I once took temporary charge of a country school during the illness of the regular teacher. I spent the noon-hour in making botanical researches in the woods surrounding the schoolhouse. Upon returning one day loaded with ferns I was surprised by the question of one of the pupils, who asked me, "How did you gather those leaves in your hands when they grow so high up in the tree?"

"They do not grow on a tree, my child, but very close to the ground. Do you not know our native ferns? What makes you think they grew on a tree?"

She replied by running into the house for her geography, which she opened and showed me the fern-like foliage of a palm tree!

As Othello acted on the hint given him by Desdemona, so I at once began to use this disclosure of the child's ignorance, to the profit of the whole school. The children, though country born and bred, were entirely unfamiliar with many of the most interesting objects of nature by which they were surrounded, but which they scarcely seemed to see.

As a beginning to my efforts in their behalf I decided to first convince the pupils that they could not properly understand even their school-books without observing the objects about them. As an illustration of what I meant, I had the school read from one of the readers, Whittier's little poem entitled "Jack-in-the-Pulpit." There were twenty-five children, present, and only a single one could tell me who "Jack-in-the-Pulpit" was, although all of them had read the poem several times, and some of them knew it by heart.

Not a single child, save the one, could explain the appropriateness of the descriptions. Many of them had never examined the flower at all, and the rest had never dreamed that there was the slightest connection between the poetry and the flower. Now that they were in a manner introduced to Jack, and knew what the poet meant in his exquisite description of him, all were wild with enthusiasm to see the reverend Jack. One little girl hoped that he "really" and "truly" would preach them a sermon from his queer little pulpit! But I thought their neglectful teacher needed a sermon far more than the unobserving pupils.

A QUERY.

BY LUKE WRIGHT.

A VERY pertinent question is, Should the child in the primary school be taught in ways and methods that will not be accepted or used in the grammar school? The query is pertinent because such methods are employed in the early grades which are discarded in the more advanced grades, involving, of course, the unteaching of much, the readjustment of first principles, loss of time, and waste of energy on the part of upper grade teachers.

Without discussing the question from a psychological and pedagogical standpoint, it will be enough at this time merely to give a few examples illustrative of the useless work done in the primary schools, useless because it must all be rearranged and done over by the teacher in the grammar grade.

First in regard to numbers. In addition the practice in certain schools is, when columns of numbers are to be added, to write the sum of the first or units column to the right or one side of the column of numbers, cross out the unit or right-hand figure and write it under the unit

column, in its correct place, leaving the left-hand figure remaining, to be carried to the next column when it is added. When the second column is added the sum is again written down to the right, the right-hand figure again crossed out and written in its proper position; and so on through the problem. This is not the practice in the grammar school; then the number to be carried is held in the mind, and only the number to be written down in its right place is put down. Some confusion always exists when the numbers to be added are in place, whether the right hand or the left is to be carried. This, of course, is a matter of memory with the pupil.

A simple test of this method will prove its practical inefficiency. I wrote some numbers on a blackboard and asked the children to add as I pointed, the addition to be made silently. The sum was to be written on the slate when I gave the permission. It was found that in every instance the scholars had written the sum of each column side by side, crossing out none of the figures, and had a sum total of thousands when only hundreds were required.

In the process of subtraction, the fashion of "borrowing" and "paying back" was in use, and the results were perplexing and the story told in the transaction absurd and time-consuming.

The simple question is, Why not teach numbers in the primary grades as they are taught in the grammar grades?

The query is equally pertinent in regard to the teaching of language, or language-work. In the primary grades the language is entirely of the descriptive sort; a picture is held up for observation, and the children are to tell what they see in the picture. It may be a winter scene that is exposed to view, and there are the "I sees,"—"I see a sled," "I see a girl," "I see two boys," "I see ice," "I see a fence," etc. There is little language in this descriptive work, and the results of it are practically useless. If on the contrary the children, after a brief study of the picture, were told to make up a story about the scene and began it, if you will, in the good old way, "Once on a time, a boy, who had a new sled took his sister for a slide on the ice. It was a very cold day," etc., then there would be developed not only powers of observation, but descriptive powers, imagination, coherency, and continuity of thought. This is the language-work demanded in the grammar grades, and this should be begun in the low grades of school-work.

TWENTY pupils in a fourth grade grammar struggle with scissors, and these are some of the results:

scissors	sisors	sisors	sisicsor
siccerors	succor	sisiors	sicsors
cissors	scissons	sizers	sizzors
siccors	sices	sessers	scisors
scissers			

METHODS FOR THE SCHOOLROOM.

FRIDAY AFTERNOONS.

BY M. E. C.

TO those teachers aiming to make Friday afternoon enjoyable by reading aloud some story adapted to the understanding of the pupil there comes at times the thought, What shall I read next? The stories from the excellent child-magazines are soon exhausted since they show a sameness of scheme and detail, and in consequence do not admit of that pleasant surprise to which it is sometimes desirable to treat even a child if one wishes to give him the best sort of training toward the development of at least an ordinary fondness for reading, if not an actual taste for literature. Many of the truly entertaining child-stories of the day delight for the hour only, and bring in the reading only a sense of amused pleasure not to be superseded by a memory of any truth, or fact; and while it is well to occasionally read for amusement simply, it would become a harmful habit if allowed to grow into a permanency. There is in these prolific story-making days no need for the foundation of such a habit, because there are tales combining the elements of fun with others, which, appealing to the highest side of one's nature, awaken a desire for noble living, arouse an interest and keen enthusiasm for all natural forces, and inspire a love for God, fellow-man, and country. Tales of this character in the most charming manner interest and give the child material for even his young brain to ponder, pointing, by a delicate, unobtrusive touch, the moral that may be made the basis of many a practical lesson in discipline when the small and numerous sins of every-day life beset him from all sides.

To this class of literature, which can be heartily recommended to teachers, especially belong Mrs. Ewing's tales, which, from the briefest to the most lengthy, show the artistic touch of genius, not hesitating to picture the common as well as the high phases of life. No one can, after a careful reading of "Jackanapes," "Story of a Short Life," "Daddy Darwin's Dovecot," and "Lob Lie-by-the-Fire,"—all considered as the best examples of Mrs. Ewing's art,—hesitate to present them to the young reader, for they abound in winsome, healthy, helpful sentiment. Take, for instance, the first-mentioned tale; here true love surmounts difficulty, and in so doing gives to the people of a quiet "green" a bit of humanity, who, inheriting a persistent, joyous, courageous disposition, grows into the right sort of boy to whom befall the misadventures to which all boyhood is heir. A courageous boy, with a dash of daring tempered by an inborn strain of manliness, is this hero, Jackanapes, who wins the affections of an old grandfather hastening to make amends for a former indifference by lightening the burden of care previously cheerfully borne by the spinster great-aunt,

whose training, though unique, has made the orphaned child a true-hearted lad. Growing into manhood, the ruling passion of his brief life is gratified, and he becomes a soldier,—even as his father had in his youth,—and, forgetting nothing belonging to the duties of the man as well as those of the soldier, and holding fast to his love for truth and the desire for noble doing, is loyal to the friends of boyhood, remembering always their frailties, helping them over rough ways and in the end laying down his own life to save that of the comrade with whom he had shared his boyish pleasures in days long past. The entire tale abounds in pleasant descriptions of the "green," the cleanly life going on about it, and in allusion to the silly goose whose notion of hiding at the slightest hint of danger is so typical of those weak human ones who babble and are mighty in courage until danger approaches when they betake themselves to places of safety, leaving the less boastful to fight the fight unto death, if need be, all unaided by them.

The second mentioned story is, if anything, a story of soldiers, and is true to the letter as regards all pertaining to them and their mode of living. The military sentiment is cunningly woven in and about the boy hero's life, making the story, consequently, wonderfully natural and strong. Here, as in "Jackanapes," the interest centers in a boy,—Leonard,—whose heritage of a love for army life rivals that of "Jackanapes"; this second hero possesses some of the same qualities of disposition as the first, but is in danger of being ruined by an indulgent, irritable father, whose caprice finds an opportunity for outlet upon the intelligent, imperious, sensitive child. A tender and wise mother's care cannot altogether counteract the injudicious treatment of the father, and when her alarm for her darling's well-being has become well-nigh unbearable, an accident, as if through some divine interference, befalls the beautiful, gifted boy, who, having but partially learned the meaning of his family motto,—*Lætus sorte mea*,—is, through sad experience, to receive a perfect interpretation of its sentiment.

The spirit substance of this motto, together with the lad's fondness for everything pertaining to military life, are now turned to account by the loving, tactful mother, who, putting aside all thoughts of self, strives to help him to fill his place in life with bravery, as great in performance for him as are the hard duties of the bravest soldier upon the field of battle. Through weary days and weeks following the accident the crippled child learns from his kind friends of the camp,—hard by his ancestral home in so beautiful a locality as to make one forget the existence of so dread a thing as war,—how to be cheery, unselfish, thoughtful for others, and to bear his cross patiently. Both these military stories, without being prosaic or preaching, cannot fail to impress the reader with delight, and to create a longing to be brave and good and true.

The third tale,—dealing with the misfortunes and good fortunes of a homeless, friendless lad, who, by perse-

verance and a faithful regard to duty, grows into manhood in as fair a spot as poet could conjure into existence, —touchingly depicts the boy's loyalty to the old man who had befriended him, and the manner in which, with tender love and delicate sympathy, the boy becomes a man, watches over and tends the old friend till life ends. Of the remaining story nothing more can be said than is contained in the following paragraph:

"Lob is a powerful temperance story, and one wholly free from the faults that make nearly all such stories undesirable reading for young people in spite of the important lessons they are written to impress."

Of Mrs. Ewing's longer stories much may be repeated that has been already said of the short ones, for they abound in delightful descriptions of beautiful country life; that expression of love for and kindness to all dumb creatures that fosters a desire to protect them; and they are, one and all, fraught with fun, fresh and charming; a pathos never failing to touch the heart; emotions, tender and true, that awaken a sweet religious trust, and a making clear of the scorn with which one should ever treat every phase of meanness. Of these tales some one has truly said, "Only good can come from them; their influence is both refining and ennobling."

CHIPS FROM EDUCATIONAL WORKSHOPS IN EUROPE.

BY DR. L. R. KLEMM, OF OHIO.

Penmanship.

SO far on my tour through German, Dutch, and French schools, I saw only one in which copy-books for instruction in penmanship were in use. Nevertheless the writing of the pupils was remarkably regular, and in many cases elegant. I found it so everywhere in Prussia, from Hamburg to Mayence. This absence had struck me as well worthy of note. When I did see the copy-book in use, I thought it time to inquire about it, and the reply was as ludicrous as it was sensible: "My dear sir, my school is under punishment. Because the boys had acquired negligent habits, and handed in poorly written compositions and home exercises, I made them procure copy-books and practice good forms of letters. The boys are fully aware of the fact, that they are, caligraphically, 'under a cloud,' and try hard to redeem themselves and regain their former standard."

"As a rule, we do not use copy-books, starting from the principle that the pupils need no special instruction in penmanship, if they write well whatever they write. This is the rule in our school. From the lowest grade upward good writing is insisted upon, and the teachers take good care never to hurry their pupils much in their written work. The teachers themselves never write negligently on the board, so that the pupils have only good

models. The result of this practice is so apparent that it needs no emphatic assurance.

"Copy-books are an excuse for bad penmanship. If the pupils write well during the short space of two or three lessons a week and hurriedly and slovenly during all the remainder of the week, the practice in the copy-book will not produce good penmen. Penmanship is an art which can be maintained only if practiced constantly. Just as little as it will do to be good, kind, and obedient during the early lesson in religion and morals, and unruly, bad, and vicious during the remainder of the day, will it do to permit the habit of poor penmanship to grow upon the pupils."

The answer seemed to me so convincing that I considered it worth quoting. I asked, "What do you do to teach artistic forms, various styles of penmanship, forms of beauty and fine initials?" The answer was:

"We do not teach them; do not want to attempt such things. If any of our pupils wish to learn them, let them apply to a special school of caligraphy. The teachers in the common school teach what is necessary to a common school education. All specialties must be excluded."

This answer indicated that the teacher had a correct idea of the end and aim toward which he was steering. I find this generally to be the case in these German schools. Each teacher knows exactly what he aims at. He has his rules and regulations, and his course of study, and he knows them by heart. His thorough professional training enables him to steer his way clear of impediments such as beset the way of any one who is not clear on what he wants. It remains ever true, that he who knows what he wants will find a way how to obtain it.

A LANGUAGE EXERCISE.

THE translation of plain into figurative language affords pupils an excellent drill in language. No little imagination is required, and considerable thought can be given, with satisfactory results, to this exercise. It is a good plan to have several sentences or phrases on the blackboard which the scholars can work at before and after school, writing out their translations and handing them to the teacher for correction. A few instances of plain language converted into figurative are given:

Plain.—Showery April.

Figurative.—Tear-dropping April.

Plain.—Oldest of lakes.

Figurative.—Father of lakes.

Plain.—The light dew,—the unpleasant storms.

Figurative.—The light-footed dews,—the surly storms.

Plain.—It is again morning; a bright, fair, and pleasant morning, and the clouds have all passed away.

Figurative.—

The morn is up again, the dewy morn,
With breath all incense, and with cheek all bloom,
Laughing the clouds away with playful scorn.

ILLUSTRATIVE TEACHING.

A Graphic Study in Natural History.

BY ELIZABETH G. MELCHER,
Comins School, Boston.

OUTLINE of a lesson showing how illustrative drawing may be used as an aid in teaching "The Story of the Metamorphoses of the Butterfly."

Use blackboard and crayon. Show a real butterfly.

What is it? A butterfly.

What else is it? No one knows.

What is there at all like it? Birds, bees, wasps, moths, flies, etc.

What are birds, bees, wasps, moths, flies, etc.? Insects.

What do you think the butterfly may be? An insect.

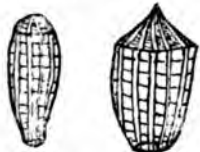
What was it before it was a butterfly? No one knows.

How many would like to know? Interest shown by all.

1st Drawing shows underside of leaf, with the eggs of the butterfly firmly adhering.



Teach the color, size, and shape of the eggs; the kinds of leaves upon which they may be found, — cabbage, turnip, currant leaves, etc.



2d Drawing. Eggs enlarged, as seen under a microscope.

Teach the arrangement on the leaf; that they are upright like rows of bottles, and are fastened to leaves and fruits by a sticky substance resembling glue; number of eggs each female lays, from two hundred to five hundred. Different shapes.

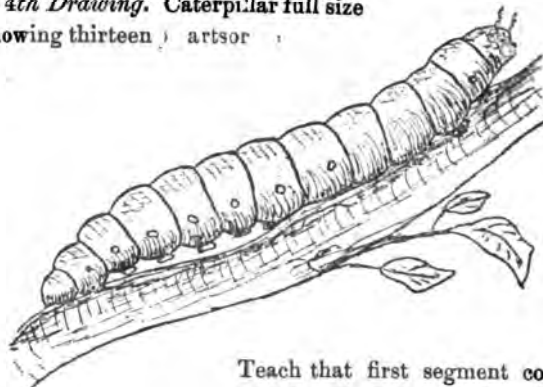
3d Drawing. Egg with a little caterpillar issuing from it.

Teach the kind of food eaten by the caterpillar; first it eats the shell of the egg, then the kinds of leaves upon which the insect finds itself. Teach the amount of food; many eat double their weight in twenty-four hours. Voracious eaters. No large animal, in proportion



to its size, eats as much as the caterpillar. Teach that it changes its skin several times.

4th Drawing. Caterpillar full size showing thirteen artors



Teach that first segment constitutes the head with the jaws; second, third, and fourth form the thorax; and the remaining ones the abdomen of the future insect. Teach the nine breathing holes on each side of the body. Teach the number and use of the true legs, where they are attached to the body. Teach the use of the false legs, and where they are attached to the body.



5th Drawing. A true leg, showing the parts.

Teach that the true legs are joined to the second, third, and fourth segments; that there are three pairs; that they enable the insect to travel about; that the claw at the end of the leg en-

ables the worm to cling to the branch. Teach that the false legs are soft and fleshy, and are shed as the hoofs and nails of the higher animals; that they also enable the worm to cling to the branch.

6th Drawing. Caterpillar spinning his web. Webs found on apple and pear trees. Show silk and cocoon spun by the silk worm.



7th Drawing. Chrysalis state.

Teach that the length of time in this state depends on circumstances; in hot summer weather eight or nine days, or it may be two or three weeks. It may even last all winter.

8th Drawing. Chrysalis changed to a butterfly.



Wings usually erect when at rest. Teach the wonderful change that has taken place; a crawling, disgusting worm, obtaining its food from coarse leaves, changed into a brilliant, airy creature flitting in the bright sunshine, and sipping the sweetness of the beautiful flowers. An emblem of immortality.

Now study the parts of the butterfly.

9th Drawing. Front view of head with the proboscis coiled flat to the face.

Teach the use of the proboscis to obtain food; that it is coiled, as seen in the picture, when not seeking food.



10th Drawing. Side view of the head, showing proboscis let down to gather the honeyed juice of flowers. This long tongue necessary to get food from the deep calyxes of flowers.

11th Drawing. Antenna, antennæ, or feelers.

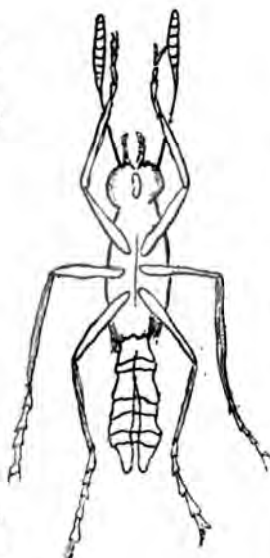
Teach that the antennæ or feelers are usually club-shaped at the ends. In this respect most butterflies differ from the moth, whose antennæ are pointed, or hair-like. They always stand out boldly from the head.



12th Drawing Eye.

Teach that the eyes are compound. Show some gem cut with the different facets, to give the pupils an idea of compound. Great size of the eye compared to size of the head. The need for such large and numerous eyes; that the butterfly has hosts of enemies, — fowls, birds, dragon-flies, and the like, and needs eyes looking every way.

13th Drawing. Underside of butterfly, showing the different parts.



Teach head, body (thorax and abdomen), legs, pair on each part of the thorax. Compare the true legs of the caterpillar with those of the butterfly. The number the same. What has become of the false legs of the caterpillar. Review proboscis, eyes, antennæ.

14th Drawing. Wing showing nerves; also the little scales lapping over each other like shingles on a house.



Teach that the fine dust we see is scales; that these scales are on both sides of the wings; that they have different forms and varied and exquisite colors.

Teach here the order to which the butterfly belongs. *Lepidoptera*, from two Greek words, meaning scale and wing.

15th Drawing. Upper side of butterfly, showing head, eyes, antennæ, thorax, abdomen, with the wings joined to the thorax. Review nerves, scales, and lepidoptera.



Another drawing, with more detail, the arrangement and distribution of color, will give additional interest. Use colored crayons, pastels, charcoals. Review each picture. Have the class do the talking this time. Teach the spelling of these words: *Caterpillar*, *segments*, *chrysalis*, *antenna*, *antennæ*, *proboscis*, *thorax*, *abdomen*, *nerves*, *veins*, *scales*.

Write a connected account of the lesson from the egg, through all the changes to the full-grown butterfly.

HAVE your daily program written upon the board so that all can know when each exercise is coming, and live up to your program.

THE RECITATION.

BY SUPT. WILL S. MONROE.

MARKED success in conducting a recitation is pretty generally a sure sign of ability to teach. In it so many forces are at work,—competition, emulation, sympathy, and embarrassment,—that the teacher, who has not learned to utilize these forces, has yet to learn one of the prime theorems of her profession. Here gather the bright, the dull, the stubborn, the timid, and the forward pupils; and while they are to be treated as a whole or compound, individuality is not to be eradicated.

A teacher's manner has everything to do with a recitation; it should not only exhibit decision, firmness, and confidence, but should inspire these attributes in the hearts of her class. Earnestness is another element of the successful recitation; the teacher that is enthusiastic and earnest, throwing her whole energy into what she does, is not likely to be annoyed with speechless, stupid, and petulant pupils. The teacher's voice, important in every other department of school work, plays no second part in the recitation; it should never be loud and authoritative, but always marked by distinctness and pleasantness, for however much she may guard against it, the pupils unconsciously imitate the teacher. Awkward and undignified positions, such as reclining on desks or tables, tilting chairs, and standing with one foot on a stool-round, should be avoided. The time of a recitation belongs to the class reciting, and the pupils at their seats should understand that they are not to trespass on it by asking questions, permissions, or otherwise diverting the attention of the teacher.

The absurd paradox of Jacotot, "Every one can teach that which he does not know himself," has long since exploded; and the teacher who does not prepare herself as well on the matter as on the method of instruction is entirely inexcusable. She should decide previously just what and how much of the subject she will teach; select a method of presenting the lesson to the class, and choose the objects and illustrations which she may want to use during the progress of the recitation. The lesson should be arranged in the natural order of development and an intelligent series of questions prepared either in thought or writing.

The lesson should be so presented that the questions will ask themselves for the pupils to answer. Exact conciseness in replies, and have the pupils avoid prefacing their answers with "why," "well," or "now," a common and a grievous fault. Talk freely with the class about the lesson, but avoid being drawn off on side issues. Always expect well-prepared lessons. Faith in pupils will pretty generally draw from them some response, while distrust will weaken them and add to their embarrassment. Treat occasional failures as things expected, and cultivate the spirit that the greatest mistake is not the zeal which, trying to do, sometimes blunders, but that

which for fear of blundering never undertakes anything, and thus makes the whole of the recitation one mistake from beginning to end.

BLACKBOARD AID IN COMPOSITIONS.

LANGUAGE WORK becomes more and more difficult and every aid, however slight, is appreciated. It is not enough that we seek the best way, for with young children any one way, even the best way, would soon become monotonous to them, and lose its interest. "Variety" must be the motto of every teacher of small children. We have seen admirable results in our own home of the "looking-up-facts" methods by means of which our little ten-year-old daughter has attained much skill in ransacking encyclopædias, books of travel, and special volumes in search of facts about the reindeer, cochineal, honey-bees, silk-growing, etc. From another school we copied from the blackboard two outlines for composition work on the part of pupils of from ten to twelve years. There is no requirement that each of these topics be considered, and others are not excluded:

FLAX.

Where grown?	Its flowers.
Where most abundant?	The inside fiber.
How grown?	Its uses.
Its height.	How prepared for use?

COLUMBUS.

Boyhood.	Preparation for first voyage.
Early voyages.	Landing.
How improved?	Later voyages.
Previous belief.	Later experiences.
Seeking aid.	Death.

MENTAL PROBLEMS.

1. I am 30 years old, you are 15 years old; five years from now how many times older than you will I be?
2. How much more is $62 + 13$ than $\frac{1}{2}$ of 75?
3. If I have $\frac{1}{2}$ of a dollar and you $\frac{1}{3}$ of a dollar, how much greater per cent. of a dollar have I than you?
4. I had 42 apples and gave $\frac{2}{3}$ of them to 5 boys; how many apples did each boy receive?
5. If $\frac{1}{2}$ a yard of cloth cost $\frac{1}{2}$ of a dollar, what per cent. of the cost of 2 yards is 1 dollar?
6. If ten times my age (30), is 20 times your age, how old are you?
7. If a train runs 30 miles in an hour, how long will it take to run 4 miles?
8. How many times 6 inches is 50 feet?
9. If 10 is 5 % of some number, what is 40 % of the same number?
10. If a quotient is 12 and a dividend 6, what is the divisor?

TOPICS IN A RECITATION IN GEOGRAPHY.

BY M. T. P.

If a teacher has no specially prepared topical outline for teaching geography, a lesson can be made interesting and topical by the use of the subjoined list. A review of a continent or a country can be made particularly interesting and complete by giving out by numbers the entire list, giving to each pupil one number and the part ascribed to him to be his special recitation at the next lesson. By a judicious change of the allotment every one in the class may finally recite on all the topics. As the study proceeds on a country, say of Brazil, or France, or India, or United States, the daily review, before the new work of the lesson is taken up, can be made by calling for the numbers as far as studied. When the list has been exhausted, there remains but little worth the while to be said on the features of a country. The use of the list will stimulate research and furnish an outlet from too close application to the words of the textbook:

- | | |
|----------------------------|-----------------------------------|
| 1. Boundaries. | 22. Race. |
| 2. Latitude and longitude. | 23. State of society. |
| 3. Characteristics. | 24. Capital. |
| 4. Zones. | 25. Chief towns. |
| 5. Size. | 26. Employments. |
| 6. Surface. | 27. Government. |
| 7. Mountains. | 28. Agricultural productions. |
| 8. Peaks. | 29. Manufactured productions. |
| 9. Plains. | 30. Commerce. |
| 10. Islands. | 31. Mining. |
| 11. Peninsulas. | 32. Exports and imports. |
| 12. Capes. | 33. Religion. |
| 13. Isthmus. | 34. Education. |
| 14. Bodies of water. | 35. Manners and customs. |
| 15. River. | 36. Language. |
| 16. Climate. | 37. History. |
| 17. Soil. | 38. Literature, science, and art. |
| 18. Currents. | 39. Journeys. |
| 19. Wind. | 40. Facts of interest. |
| 20. Animals. | |
| 21. Population. | |

DRAWING MADE EASY.*

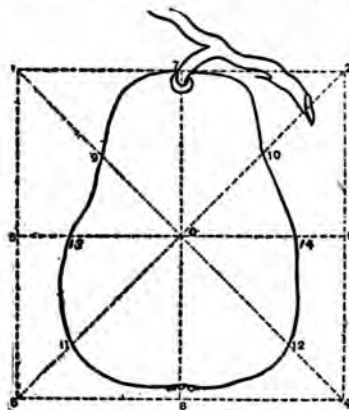
THE popularity of the articles of Professor Augsburg in these pages has been such as to lead us to prepare the following article from Miss Hall's book, recently issued:

The great drawback to the progress of drawing as a study in the public schools is the idea that it is only for the talented few. As a matter of fact, nature has prepared more teachers of drawing than of arithmetic. One who has not had the training of hand requisite for drawing a smooth, straight line may have the ability to teach another to do so.

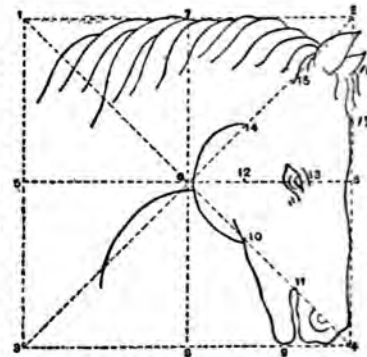
* Prepared editorially after examining "Drawing Made Easy," accompanied by fifty cards of design, by Abbie E. Hall.

Those who have no taste for drawing and no natural skill in it, especially teachers of country schools, who have no privileges for studying the art, may be aided by the following ingenious device for making drawing easy.

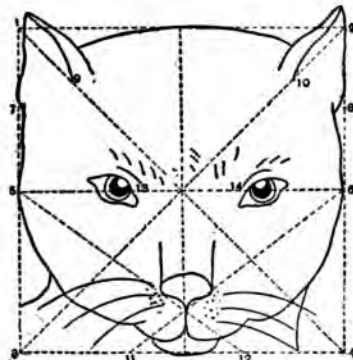
A few illustrations will show the kind of aids and directions to which we refer. Here, for instance, is the drawing of a pear. The work is to be done from dictation. Draw a square. Do not allow the use of a ruler. It is not drawing to make a straight line with a ruler. Draw the diameters, 5-6, 7-8, and the diagonals, 1-4, 2-3. Divide the upper. Bisect the upper semi-diagonals



at the points 9 and 10. Trisect the lower semi-diagonals, marking the outer points 11 and 12. Trisect the horizontal diameter, marking the outer points. Through the points draw the outline of the pear. Draw the stem. Draw a horse's head. Draw square, diameters, and diagonals as before. Trisect right-hand semi-diagonals and diameters, marking the points 10 and 11, 12 and 13, 14 and 15.



Bisect the right semi-base line at the point 9. Trisect 2-6 at points. Use these points in drawing the outlines in the copy. Draw a cat's head. Draw square, diameters, and diagonals as before. Trisect the upper semi-diagonals, marking the upper points 9-10. Trisect the horizontal semi-diameter, marking the inner points 13 and 14. Trisect each half of the base line, marking the inner points 11 and 12. Connect 5 and 12, 6 and 11. Draw the outline as per copy.



FLUENCY and correctness are the ends to be aimed at in language work.

ARTICULATION.

THE teacher must begin early, and continue faithfully, articulation exercises. If the teacher would have each pupil pronounce one test word with care, and the class repeat it in concert each day, it would accomplish more and not take a tenth part the time now devoted in the reading class to criticising the pronunciation of pupils by the classmates and teacher. Give special attention to the *initial* and *final* sounds. Remember that clear, distinct articulation depends chiefly upon the consonants. Here are some good test words to call out distinct articulation :

accidents	decease	muslin	talents
accidence	disease	muzzling	talons
acts	east	noose	thyme
hacks	yeast	news	time
ere	gesture	of	wet
ant	jester	off	whet
haunt	guess	old	wail
base	guest	hold	whale
bays	art	pillar	were
bean	heart	pillow	wear
been	elm	precedent	where
cart	helm	president	weigh
chart	intense	salary	why
century	intents	celery	whether
sentry	lease	surplice	wither
cruise	lees	surplus	whither
crews	loose	subtile	which
dependence	lose	subtle	witch.
dependants			

ALPHABET DEVICE.

CUT up an alphabet of large letters, or, if the class be large, two alphabets, and place all the letters, except X, Y, and Z, in a box. When the interest of the class lags start this box down the aisle, each pupil drawing a letter and passing the box to the next. When a pupil draws a letter, and has passed the box, he is to name some country, state, city, river, or mountain, whose name begins with that letter, and tell something about it.

D.—*District of Columbia*, includes Washington, the capital of the United States, and Georgetown.

F.—*Florida*, the great winter resort of northern invalids.

U.—*Uxbridge*, a town in Massachusetts in which my grandfather lives.

M.—*Merrimac River*, upon which Manchester, Lowell, Lawrence, and Haverhill are situated.

R.—*Rio de Janeiro*, the metropolis of South America. It is surprising how much interest can be awakened by a little device of this kind. Try it.

INSIST upon having all the blackboard surface that can be put upon your walls, and try to have good boards.

A PRIZE EXERCISE.

TAKE a story of short, easy words, and in large type, such as may be found in almost any religious paper, notably the *Congregationalist*, in the lower right-hand corner of the sixth page. Cut this up into words, leaving the punctuation mark with the word preceding it; keep each paragraph by itself, and at first keep each sentence by itself, and then let them try to make the story, which they must not have seen. It is very difficult sometimes, but it is profitable, and with a little care at first they will enjoy it. We give the following illustrations. We will give a dozen of the best Dixon lead pencils to *each of the first ten pupils* who send us the stories which these words make, each pupil to be from the room of some teacher who is a subscriber to the *AMERICAN TEACHER*. Only one pupil can take the prize from one schoolroom. A pupil may get any help he can from his classmates. If no one gets out all the stories we will send the prizes to those who get out the most sentences.

FIRST STORY.

1st Sentence. — at all her. her laugh friends makes May Miss

2d Sentence. — hour. screams If an. by for runs poor mouse her, she

3d sentence. — fit. her A put her a will bee on frock in

4th Sentence. — a she she should small was would buzz fly house call help If to get her, if her as on hurt. hair, the and ear, all her in in

SECOND EXERCISE.

- 1.— eyes are for? What see To with.
- 2.— What for? are ears To with. hear
- 3.— a To tongue for? is talk with. What
- 4.— books. with. are learn for? To What

THIRD EXERCISE.

if not Look! the him. care you there our dog but He takes is do bark, He house. of good will not bite, Tray he will hurt.

FOURTH EXERCISE.

- 1.— long tail. a and cat soft fur has A
- 2.— rat looks a soon. meek, will she a She sly; fly is or and mouse, kill she she and him, find at but him if
- 3.—them. She birds will kill catch and

FIFTH EXERCISE.

Seven short sentences. — ring. the spin A your the ball. A Toss bell. Ring A that nag. Ride gold muff. colt. wild warm top.

HAVE always at hand a foot rule and a yardstick.

HAVE an abundant supply of crayons, erasers, and pointers.

MUSIC DEPARTMENT.

INDIVIDUAL effort is quite as essential in the musical exercise as in any other department of school work.

VARY the monotony and quiet the restlessness of your scholars by frequent short exercises in singing.

THE method of teaching music is a means and not an end, and should be so regarded by those giving instruction in this branch.

FIRST lessons in music from the chart tend to fix the *attention* of pupils, and thus have a value beyond the mere culture in that department of instruction.

THE teacher who would be successful in teaching music must realize its value from an educational point of view. While it may not apply, so directly, to the preparation of the child for the strictly practical duties of life, it certainly does afford means of mental and moral culture of equal value to any of the ordinary branches.

O. E. McFADDON, of Minneapolis, emphasizes the value of singing as a health exercise. It serves as a physical recreation, and is specially advantageous to those children who, on account of constitutional delicacy, are precluded from taking as much out-door exercise as they would were they robust. A well-conducted singing exercise, with good ventilation, is physically invigorating. It implies deep breathing, which develops the lungs and exerts a definite influence upon digestion. Children regularly exercised in singing are stronger and healthier therefor.

SINGING IN GERMAN SCHOOLS.

BY DR. L. R. KLEMM, OF OHIO.

OH, but what an inexhaustible spring of musical talent is found in German schools! These children sing divinely. Their teachers all play the violin more or less well, and have a thorough theoretical training in music, teach the notes, and generally conduct the musical performances of their classes as leaders of orchestras do in instrumental music. That is to say, they beat time, keep the different parts in good harmony, stimulate here, depress there, and work like good fellows. The results are touchingly beautiful. I heard three and four-part music in the upper grades of common schools.

Many a time I heard the teacher call upon a single pupil to *sing alone*, as we would expect him to *read alone*. They consider this *reciting in music*. In one city on the Lower Rhine I heard a mass-chorus which touched me to the quick. The children sang patriotic airs with an artistic finish which quite upset me. An old gentleman who had accompanied me was moved to tears.

Our American city schools are doing a noble thing in awakening the musical sense of the nation. The adult American, as a rule, is not musical. General Grant used to say: "I know but two tunes: one is Yankee Doodle, and the other—*isn't*." And if we were to inquire among our Anglo-American friends we should find that the older generation is not any more musically inclined than General Grant. But in the younger generation a great love and comprehension for music makes itself felt, which is fostered by easy melodious home-made airs such as "Grandfather's Clock," "Wait till the Clouds Roll By," etc. Inferior as these airs may be, it will not do to undervalue their great influence upon the latent musical talent of our American conglomerate. Some generations may yet pass away before we can find such a school in New England as I saw here, where, among 418 pupils, only two were found without a musical ear.

A Novel Exercise in Music.

I noticed a novel exercise in vocal music which I deem worthy of mention. The teacher wrote the lines of a pretty little poem between the empty music lines on the board and called upon some pupils to compose a new melody. The first pupil looked at the first line thoughtfully a while, and then struck out, giving a very acceptable air. The teacher asked her to repeat it, and then fixed it by writing it in notes. The second pupil then followed with a continuation which was less acceptable. Another suggested a little but vital improvement which made the line much more acceptable. Again a new line was added, till the four lines were finished. Now the teacher played the tune, suggesting two more, though little changes, and indeed the melody seemed very pretty.

Now it was harmonized. A pupil was called upon to write the second part. This he did, with some errors, which were speedily detected by other pupils. Another added a third part. Of course, this took longer than to write about it, but within the short space of thirty-five minutes the three parts were all down on the board. They were tested on the violin and found to harmonize quite well. Now followed a grand rehearsal; that is, the class sang the newly composed song. Again a few changes were found desirable, and again it was tried, till it found the approval of the teacher. There was no need of calling for order. The order was perfect, simply because all the pupils were intensely interested. The lesson was brought to a close by the order to copy the new song in their manuscript music books. I have rarely enjoyed a singing lesson as much as I did this one.

The school in which this brilliant theoretical instruction in music was witnessed gave me the pleasure of hearing choruses of wonderful sweetness. The text was sung so well, emphasis or expression was so excellently brought out, that no professional choir could sing better. The free metallic sound in the voices of these German youngsters is quite enjoyable.

[Written for the AMERICAN TEACHER.]

"MY TREMBLING SOUL, BE STILL."

Arr. by N. LINCOLN

♩ Moderato.

1. Oh! let my trembling soul be still, While darkness veils this mor-tal eye, And wait thy wise, thy ho-ly will, Wrapt yet in fears and mys-ter-y. We can-not, Lord! thy pur- pose see; Yet all is well, since ruled by Thee.

2. When, mounted on thy cloud-ed car, Thou send'st thy chast'ning spir-its down, We 3. Thus, cheered by love di-vine, we tread The nar-row path of du-ty on; What still dis-cern, thy light a-far, Thy light, sweet beaming thro' thy frown: And tho' some cher-ished joys are fled? What tho' some flatt'ring dreams are gone? Yet should we faint a mo-ment, then We think of Thee, and smile a-gain. pur-er, bright-er joys re-main; Why should our spir-its, then, com-plain?

THE AMERICAN TEACHER.

A. E. WINSHIP, }
W. E. SHELDON, } *Editors.*

All communications should be addressed to the Editors.
Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 3 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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TEACH temperance physiology persistently.

IF you cannot go to San Francisco, go to Newport, next July.

A CHRONIC grumbler is the greatest educational nuisance in existence.

MAKE sacrifices if need be, in order to go to San Francisco next July.

WE have the best spring exercise we have ever seen from any one pen, that by Kate L. Brown.

SEND to us for particulars, if there is any hope of your going to San Francisco. We will send circulars free.

THE poems are both by Miss Libby, who now helps us in making the AMERICAN TEACHER good in every part.

BE of good courage, there is sure to be better pay for the best teaching. Right must win, and every element of justice demands this.

"KIP" is the most affecting story we have read in many a day,—an admirable companion-piece to Esther Converse's "My Pupil" of last month.

HUNDREDS of teachers have been made very happy by getting up clubs for the AMERICAN TEACHER. Our premiums are unparalleled. Send for a "Premium List."

NEWPORT is to be the most attractive place for teacher in New England next July, and it will see the largest number of teachers that has ever assembled in any eastern city. Lay all your plans to be there the second week in July.

THE *Youth's Companion*, *Wide Awake*, *St. Nicholas*, *Harper's Young People*, *Our Little Ones*, *Little Men and Women*, *Babyland*, *Pansy*, are all excellent school room periodicals.

A CATALOGUE of the Salem State Normal School from the opening of the school in 1854 has been prepared. Every graduate will want a copy. Send fifty cents to Miss Mary A. Plumer, Salem.

THE Hon. J. W. Dickinson, secretary of the Massachusetts Board of Education, has issued a "Course of Study for Ungraded Schools." Every country teacher should secure a copy, which can probably be had for the asking.

WE thank our subscribers who, by the thousand, write us in ardent praise of the AMERICAN TEACHER. We rejoice in its success, not only because of the gain to us, but because of the gain to the profession. Help us to extend its circulation, and we will continue to make it better and better every month.

THERE were never so many and so valuable illustrated articles in any one number of any educational periodical as in this number of the AMERICAN TEACHER. There is more and better work to follow. Every illustration is made on purpose for this paper, and they are elegantly made. Call the attention of your friends to the merit of these pages.

THERE is no power in the world that can make a good school without a good teacher. You are the unit of force. But you cannot make the system in your city or town a success. There must be some unifying force. You will gain more from good supervision than any other person in your town. Do all in your power to hasten the day when you shall be relieved of much annoying detail by having a superintendent to unify the best work of the best teachers in the best way.

MASSACHUSETTS has neglected her country schools until there are many towns that are left far behind the cities, far behind the country towns of the West. The board of education is trying to secure better supervision for these towns. We hope the legislature will be wise in following their lead in this matter. The plan is for three or four towns to unite and employ a superintendent, paying \$1,500 for a good man, the state to pay one half the amount. No more important measure has been proposed in a long time.

THE practice of detaining children in the schoolroom during recess time, for the sake of punishment, cannot be too severely condemned. Apart from the lamentable exhibition on the teacher's part that he is forced to resort to

such a weak subterfuge in administering punishment, it is injudicious to the well-being of the pupil, making him a victim to the draughts in the room, if it be ventilated by opening windows and doors, or compelling him to continue to inhale the noxious air already foul from the confinement in the room. Every child has a right, an inalienable right, to fresh air and exercise, and he should not be deprived of this by the caprice of a teacher. If the boy deserves punishment, administer it in the prescribed form, but give him the fresh air and exercise which the recess time is supposed to provide for him.

SUMMER SCHOOLS.

THE number of summer schools will be diminished through combination and the survival of the fittest; but the value of those remaining will be greater than ever before.

We are in a position to know the careful and costly preparations being made at the various resorts for the coming season, and we unreservedly and most heartily urge every teacher who can, to attend at least one of these schools. If you cannot complete the course at any one of them, make it in your way to spend at least a week with these noble, enthusiastic, progressive teachers.

All of the leading schools are thoroughly reliable, and do more than they promise in their circulars. Your choice of a school will depend almost entirely upon your acquaintance with the managers, instructors, some students who are going, or the nearness and attractiveness of the location.

Send for circulars of the leading schools and decide for yourself which one you wish to attend. We will vouch for the thorough reliability of every school that advertises in these columns. We know the most of these schools personally, and intend to visit at least three of them the coming summer for our own enjoyment and the inspiration of such companionship. We appreciate, fully, what Dr. E. A. Sheldon, of the Oswego Normal School, said, after spending three weeks last year at one of these schools: "I never spent the same time more profitably in my life. Teachers cannot afford to lose such opportunities."

REASONS IN FAVOR OF THE PUBLIC SCHOOLS IN 1702.

BY WINTHROP.

IN a book entitled "The Theory of Sciences; or, The Grounds and Principles of the Seven Liberal Arts, which are Grammar, Logick, Rhetorick, Musick, Arithmetick, Geometry, and Astronomy," published in London, at the "Angel and Bible without Temple Bar, MDCCII," there are many quaint "questions, problems, and propo-

sitions, both delightful and profitable." Under each head above given there is much that is entertaining and instructive worked out by the ingenious author of the book, and it is interesting to observe the different methods employed for the development of the various subjects under consideration. Not much is given by way of illustrating the points or rules that the author gives, but in the division devoted to "Rhetorick" there is inserted a curious oration uttered in 1671 by a young student in "Praise of Publick Schools above Private." It is given by the author as a model of rhetorical skill and as worthy of emulation. It is as follows:

"There is a great Controversy this Day to be decided concerning Schools, whether Parents had best to educate their Children in Publick Schools or Private. If I may speak my mind in this place without offence I would give the Preheminence to Publick Schools, and have a perfect Number of Reasons for it, that is, Seven, and I hope my Reasons are as perfect as their Number.

"*First*: The ablest Masters are in Publick Schools (at leastwise we need not fear to say so,) for who that is Master but of a Private School, will be so Presumptuous to compare himself to one of them, any more than a Petty Prince to compare with the Grand Seignior.

"*Secondly*: Publick Schools make the best Scholars, great Linguists, brave Orators, excellent Poets and what not? When they come to the University they are not like Children that are born very Great, of which they use to say that they are half brought up so soon as they are born.

"*Thirdly*: In Publick Schools there is the greatest Emulation, which makes some Boys tug at their Oars like Watermen that Row for a Wager, and strain their parts as Lutanists sometimes do their strings, till they even Crack again: and what the Edge of their Souls till it be ready to cut the Scabbard of their Bodies.

"*Fourthly*: It is a great Reputation to be of a Publick School, and to be Captain in such a School is to be a little Vice Chancellor: All the Mischief in every Boy hath not Capacity to arrive to it, (as they say *E quovis ligno non fit mercurius*.) Every Stick will not make a Mercury.

"*Fifthly*: Some Publick Schools allow Maintenance to those who are sent by them to the University. This I confess is or should be no motive to them that need it not, but a very great one to them that do; nor doth it signify anything to them that are not intended for the University, but to poor Lads who are so designed, it makes great Amends for all the hardships they commonly endure in Schools.

"*Sixthly*: Publick Schools have the best Discipline. There boys do stand in the greatest Awe. Some Boys will be Ranters in Private Schools but in Publick Schools they are as Demure as Quakers.

"*Seventhly and Lastly*: Publick Schools do furnish Boys with due boldness and confidence, and are not afraid or ashamed to look a Man in the Face, no nor spit in his Face upon a good occasion. Now the Lord Bacon tells us, Confidence can do Wonders: When Mahomet had promised to make a Mountain at a great distance to come to him at his call, and Multitudes waited to see the performance which he could not effect: He did but say with a good laudable Confidence, 'if that Mountain will not come to Mahomet I tell you what, Mahomet will go to that Mountain' and it passed for a Miracle among the common People. And many professions require a great deal of Confidence, Lawyers must sometimes set a good face upon a bad Cause or it will be the worse for their Clients. Physicians must have a convenient boldness not to be out-braved by Mountebanks, out-talked by Midwives, Nurses, Old Women and every Medling Gossip, but if any Man can answer these seven Reasons I shall content myself with a Private School."

FOR FRIDAY AFTERNOON.

MAID MARIAN AT SCHOOL.

BY KATE L. BROWN.



MARIAN'S a little girl,
Fleet of foot and bright of eye;
Round her brow the tresses gleam
Like to sunlight on the stream;
Waves each dancing, golden curl,
As she flutters gayly by.

Maiden Marian goes to school;
Not a wall her schoolroom bounds;
Learns she lessons not from books;
Birds, and flowers, and running brooks,
Knowledge set to Nature's rule,
Pleasant sights and pleasant sounds.

All for her the skies are blue,
Round her brow the breezes stir,
Blossoms for her the floweret sweet,
Springs the grass-blade at her feet.
Let us share the sweetness, too,
Let us go to school with her.

January.—

"Come, Marian, come!" the wild north winds are calling,
And from the leaden skies the snowy flakes are falling.
All white and dumb, now lies the frozen river,
The naked trees
Before the wild winds shiver.

The year's gateway! and 'neath the snow are sleeping
A thousand tender things;
Beneath the strong wind's sweeping
Fair spirit flowers, from this white world are stealing,
The treasures of the snow
To her young eyes revealing.

February.—

And still the chilly north winds sing,
The skies weep out in sad complaining,
The earth is spent with icy raining,
Yet Marian dreameth of the spring.

Some morn the wind forgets its lay,
Through bending boughs the sunlight streaming,
A thousand fairy jewels gleaming,
Deck every little twig and spray.

List child! what do the north winds bring?
North wind is with this message laden,
"The coldest month, my little maiden,
The shortest is, and nearest spring."

March.—

March is only a breezy boy!
Across the land he sweeps and whirls,
He tangles Marian's sunny curls,
And laughs aloud in his roguish glee.

March and Marian laugh together,
To see the snow fade from the hills,
To hear the wild, glad mountain rills
Go rushing forth in the changeful weather.

He coaxes the leaf-buds on the trees,
He hums and sings to the ocean billow,
He tells the story of Pussy Willow,
To Marian roaming over the lea.

PUSSY WILLOW.

Pussy Willow wakened	Never had the brooklet
From her winter's nap,	Seemed so full of cheer.
For the frolic breezes	"Good morning, Mistress Pussy;
On her door would tap.	Welcome to you, dear."

"It is chilly weather,	Never guest was quainter.
Though the sun feels good,	Pussy comes to town
As I have a toothache	In a hood of silver-gray
I must wear my hood."	And a coat of brown,

Mistress Pussy Willow	While the happy children
Opened wide her door,	Cry with laugh, and shout,
Never had the sunshine	"Spring is coming, coming!
Seemed so bright before.	Pussy Willow's out!"

April.—

Marian straying in the wood;
Baby April passing by,
Breaks the dreamer's solitude
With a little mournful cry.

"I have planted violets,
But I fear they will not spring;
I have called my bluebirds north,
What if they should never sing?"

Then the silver tears fall down
From her eyes so blue and sweet,
And the violets unfold
From the grasses at her feet.

From the budding bough o'erhead
Comes a far, delicious strain;
"Hark!" cries April, smiles and tears;
"Now my bluebirds sing again."

May.—

Hand in hand through the sunny meadows
May and Marian tripping pass;
The wind-flower nods from the woodland shadows,
The buttercup is starring the grass.

They are watching the birds weave the hay and mosses,
And the small brown ant dig her winding cell;
They learn of the working bee his secrets,
And wonderful histories May doth tell,—
A tale of "a poor little baby streamlet
That lost its way in a gloomy wood,
But went right on in the dark'ning shadows

And tried its best to be brave and good,
Till at last it comes to the pretty meadow,
To the buttercups and the sunbeams bright;
Then the voice of the story-teller trembles,
And May and Marian laugh outright.

June.—

Then rosy June takes Marian by the hand;
"See all my daisies in the grass!" she cries;
"See how they nod their funny little frills,
And, courtesying in the breezes, fall and rise."
Then Marian, where the meadow grass grows long,
Sits down with June to hear the daisies' song

[Sing "Daisy Nurses," words and music.]

July.—

Golden days and a sky of blue,
The sweet wild flowers have vanished quite;
Gone is the daisy's gold and white,
The buttercup's gown of the sun's own hue.

Robin in cherry tree o'erhead
Peeks away with his little bill;
Robin and Marian get their fill,
Sipping wine from goblets red.

August.—

Upon the lakelet's quiet breast
The lily lies in placid rest;
The sunflower courts the fervid heat,
The dust lies white in the silent street.
"Come, Marian, come!" the grasses call,
"Away! away! to the grasshoppers' ball."

[Sing "Grasshoppers' Ball," words and music.]

September.—

Maid Marian stands 'neath the drooping bough,
The early apples are growing yellow,
The peaches' cheeks are waxing red,
The pears, to the heart, are sweet and mellow.

She sees the haze on the distant hills,
And the golden-rod by the road upspringing;
She hears the cries of the restless birds
Already plumed for their southward winging.

"Summer has been so gay and glad
I am almost sorry to see it going;
Yet the whole round earth holds a heart of joy,
Seedtime or harvest, flowers or snowing."

October.—

October skies are the clearest blue,
October trees are in yellow and red,
October winds have a jolly shout,
And shake the nuts down on Marian's head.

October flowers crowd the wayside bank,
A royal company, blue and gold,
Over them hover the courtier bees,
Telling the love tale often told.

This is the triumph of Mother Earth,
Under the deep sky's arching dome,
Throned aloft in the wheat and corn,
Marian sings in the "Harvest Home."

November.—

Marian stands within the wood;
All the branches are black and bare,
The brooklet sings in a softer tone,
A sadder spirit haunts the air.

Up in the boughs are the empty nests;
Summer birdlings, alas, have flown,
"Good by, summer sweet, good by;"
Hear the autumn breezes moan.

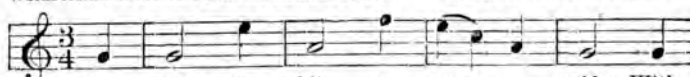
"All my flowers have gone away,
I must wait until the spring;
Baby April brings them back
When her pretty bluebirds sing."

[Sing "Good by Little Flowers," words and music.]

Daisy Nurses.

Words from Tonic Sol-Fa Music Course, by per.

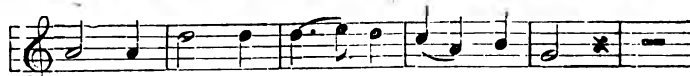
Words and Music by K. L. B.



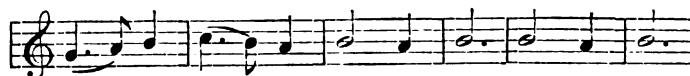
1. The dai - sies white are nurse - ry maids, With
2. The dai - sy ba - bles nev - er cry, The
3. The dai - sies love the gold - en sun, Up



- frills up - on their caps; And dai - sy buds are
nurs - es nev - er scold; They nev - er crush the
in the clear June sky; He ga - zes kind - ly



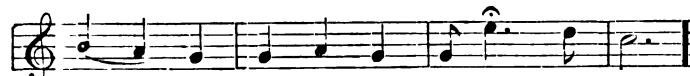
- lit - tle babes, They tend up - on their laps.
dai - ty frills A - bout their cheeks of gold.
down at them, And winks his jol - ly eye.



- Sing "Heigh ho" while the wind sweeps low, wind sweeps low,
Prim and white in the gay sun - light, gay sun - light,
Soft and slow all in a row, in a row,



- wind sweeps low, Sing "Heigh - ho" while the wind sweeps low, Both
gay sun - light, Prim and white in the gay, sun - light, They're
in a row; Soft and slow all in a row, Both



- nurs - es and ba - bles are nodding just so.
nld, nid, nod - ding, oh, oh, pret - - - ty sight.
nurs - es and ba - bles are nodding just so.

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The Grasshopper's Ball.

Words and Music by KATH L. BROWN.



1. In the sky the sun is shin - ing, From the elms the
2. Little Miss Spi - der's ver - y charming As she danc - es
3. Mis - ter Bot - tle fly's co - quet - ing With Miss Cricket



- rob - ins call, Hur - ry, skur - ry, ant and crick - et,
out and in, To the mus - ic quite en - trancing,
I de - clare, And the lo - custs, haugh - ty creat - ures,

[OVER.]

December.—

The year is drawing to its close,
The merry bells swing to and fro,
And Marian finds the Christmas rose
Just op'ning in the first new snow.

She watches for the wond'rous star
To flame into the evening skies,
And dreams how wise men from afar
Had seen its birth with happy eyes.

She follows, too, their joyful tread
To where, within the fragrant hay,
(Great oxen watching overhead)
The little Christ Child, dreaming, lay.

"The flowers are gone," Maid Marian said,
"The birds have flown from field and wood;
But best of all is Christmas tide,
The Christ Child helps me to be good."

So through the year Maid Marian
Learns lessons from the flowers and trees;
She knows the life of bee and bird,
The message of the brook and breeze.

Into her life no shadows fall,
She knows that God is kind and good;
His hand protects her while it holds
The wild, shy creatures of the wood.

O happy life and happy trust!
O kingdom free from doubt or sin!
Thy gate is closed to show and pride;
The "pure in heart" may enter in.

THE SEASONS.

FOR FIVE LITTLE GIRLS.

1st Girl.—

I love the spring, when slumbering buds
Are wakened into birth;
When joy and gladness seem to run
So freely o'er the earth.

2d Girl.—

I love the summer, when the flowers
Look beautiful and bright;
When I can spend the leisure hours
With hoop, and ball, and kite.

3d Girl.—

I love the autumn, for the trees
With fruit are bending now;
And I can reach the luscious plums
That hang upon the bough.

4th Girl.—

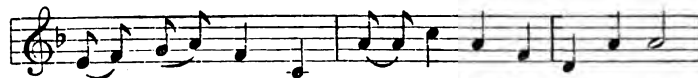
I love to have the winter come,
When I can skate, and slide,
And hear the noise of merry sleighs
That swiftly by us glide.

5th Girl.—

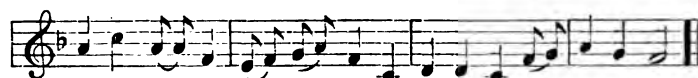
I love the seasons in their round;
Each has delights for me;
Wisdom and love in all are found;
God's hand in each I see.



Has-ten now to the grasshopper's ball. Little brown legs so
Of the ka-ty-did's vi-o-lin. See the bee-tles,
Give themselves a stuck-up air. Hop-ping, skipping,



light and slen-der, Mer-ri-ly o'er the grass-es swing;
grave and pon-drous, Swing and chas-sè to and fro,
danc-ing, turn-ing, Twisting, tumbling one and all,



Hopping, skipping all to-gether, Light of foot and fleet of wing.
In and out and down the middle, See the dad-dy-long-legs go.
Was there ever a jollier party Than Miss Grasshopper's birthday ball.

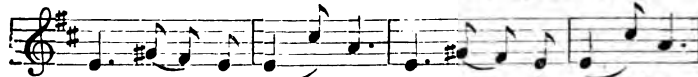
From "Tonic Sol-fa Music Course," by permission.

Good-bye, little Flowers.

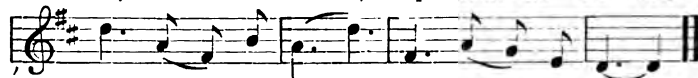
Words and Music by KATE L. BROWN.



1. Hark! through the pine boughs Cold wails the blast,
2. Cold are No-ven-ber skies, Sun-less and drear,
3. "Good-bye, lit-tle flow-ers," The i-cy winds sing;



Birds south are fly-ing, Sum-mer is dy-ing,
Gol-den rod, eye-lids close, As-ter, tuck up your toes,
Snow, blanket them o-ver, Sleep well lit-tle clo-ver,



Flower time is past, Flower time is past.
Win-ter is here, Win-ter is here.
Sleep till the spring, Sleep till the spring.

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RECREATION.

THE Southwestern Journal of Education gives this playful little exercise for the little folk, which they found in the Buchanan School. We present it in what seems to us a more usable form:—

[Hold left hand with fingers spread.]

Five little rabbits went out to walk;
They liked to boast as well as talk.

[Point to the forefinger.]

The first one said, "I hear a gun."

[The middle finger.]

The second one said, "I will not run."

[Third and fourth fingers.]

The little ones said, "Let's stay in the shade."

[Point to the thumb.]

The big one said, "I'm not afraid."

[Strikes the desk lightly twice with the fist.]

Bang! bang! went the gun.

[Throw both hands behind you.]

And they ran—every one!

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE AMERICAN TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

375. At what time between 9 and 10 o'clock will the hour and minute hand of a watch form a right angle?

Let x = number of minutes after 9 o'clock. The minute hand will move over x minute spaces in x minutes, and the hour hand, going $1\frac{1}{2}$ as fast will move over $\frac{x}{12}$ spaces in the same time.

In 30 min + $\frac{x}{12}$ the longer hand will be 15 minutes behind the shorter, forming a right angle.

Hence $x = \frac{x}{12} + 30$.

Clearing of fractions, $12x = x + 360$.

Trans. and uniting, $11x = 360$.

Dividing, $x = 32\frac{8}{11}$ minutes past nine o'clock. Ans.

W. O. BUTLER, Uxbridge, Dak.

392. Define the "rational" and the sensible horizon.

The rational horizon is a plane parallel to the sensible horizon of a place, and passing through the earth's center. The sensible horizon is a plane passing through the eye of the spectator and at right angles to the vertical at that place.

W. E. LIGHT, Carmel, N. Y.

Another Answer.—The rational horizon is a great circle parallel to the sensible horizon, and whose plane passes through the center of the earth. The sensible horizon is the circle where the earth seems to touch the sky.

A. R., Archbold, O.

394. A tree 75 feet high was broken in two parts, the top striking the ground 15 feet from the base. At what height was the tree broken in two?

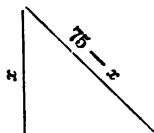
Let x = part standing.

$75 - x$ = " broken off.

$(75 - x)^2 - x^2 = 225$.

$150x = 5400$.

$x = 36$.



15

E. E. WERNICK, Racine, Wis.

Credit to F. J. Harrison, St. Peter's, Minn.; A. L. Custer, Huntingdon, Pa.

399. Was Henry VIII. of England a competitor for the imperial crown of Germany with Francis II. of France and Charles II. of Spain? Robertson's Charles V. gives him as an aspirant. In case of success what would have been Henry's title? Francis's?

Henry VIII. was an aspirant to the throne of Germany. On the death of Maximilian I. Henry thought of becoming a competitor for the imperial crown, but soon discovered that he had no chance of success. Francis II. was not a competitor for the German throne, but Francis I. of France. In case of success, Henry's title would have been also Henry VIII., Emperor of Germany and King of England; that of Francis I., also Francis I. Emperor of Germany and King of France.

G. B., Weimar, Texas.

405. Literary enigma.

The "whole" is a stanza from the "Psalm of Life," by Longfellow:

"Life is real! Life is earnest!
And the grave is not its goal;
Dust thou art, to dust returnest,
Was not spoken of the soul."

1. Judge Tourgee's book, *A Fool's Errand*. 2. Charles Dickens's book, *Little Dorrit*. 3. Longfellow. 4. David, the ancient poet. 5. Mrs. A. D. T. Whitney's book, *Sights and Insights*. 6. American Poet Whittier. 7. American clergyman and author, Edward Everett Hale. 8. Rip Van Winkle. 9. Ursula, wife of "John Halli-

fax." 10. Uther, father of Arthur. 11. "Solinus." 12. "Flower of the Poets." 13. Statius, Roman Poet.

A. D. B., Boltonville, Wis.

Credit also to Helen M. Woodcock, Batavia, N. Y.; M. B. A., Eau Claire, Wis.; and Harry Starks, Riverton, Mason Co., Mich.

412. Given $x^2 + y = 7$, and $x + y^2 = 11$. Solve the equations.

(1) $x^2 + y = 7$;

(2) $x + y^2 = 11$;

(3) $x^2 + y - 3 = 4$;

(4) $x + y^2 - 2 = 9$;

(5) $y - 3 = 4 - x^2$;

(6) $x - 2 = 9 - y^2$;

(7) $2 - x = y^2 - 9$;

(8) $\frac{y-3}{2+x} = 2-x$;

(9) $2-x = y^2-9$;

(10) $\frac{y-3}{2+x} = y^2-9$;

(11) $\frac{y}{2+x} - \frac{3}{2+x} = y^2-9$;

(12) $y^2 - \frac{y}{2+x} = 9 - \frac{3}{2+x}$;

(13) $y^2 - \frac{y}{2+x} + \left\{ \frac{1}{2(2+x)} \right\}^2 = 9 - \frac{3}{2+x} + \left\{ \frac{1}{2(2+x)} \right\}^2$;

(14) $y - \frac{1}{2(2+x)} = 3 - \frac{1}{2(2+x)}$;

(15) $y = 3$;

(16) $x^2 + y = 7$;

(17) $x^2 = 7 - y = 7 - 3 = 4$;

(18) $x = \pm 2$.

Supt. S. L. LUTZ, Hicksville, O.

QUERIES.

418. How long will a copying pad last, and how is it prepared to receive a new copy?

419. What states beside Rhode Island require qualifications of any kind, of voters?

420. How would you parse or diagram like in the sentence, "He defends his post like a hero?"

421. Find the rate at which the interest of \$35.50 for 4 yrs., 5 mo., 28 da. is \$7.378.

422. In Bancroft's *Life of Washington* it is stated that Generals Sullivan, Sterling, and Woodhull were captured by the British at the battle of Long Island; if so, how were they regained by the Americans?

423. Should we say *anybody else's*, or *anybody's else*? Why?

424. What two English prelates have sought to become the absolute power in England, and to subordinate the state to the church?

425. Where was "Liberty Bell," in Philadelphia, cast? How and when did it get cracked?

426. Four years ago, a son's age was equal to $\frac{1}{4}$ of his father's; three years hence it will be $\frac{1}{5}$ of his father's. Required the age of each.

427. Give a solution of the following problem by arithmetic: The head of a fish was 9 in. long; its tail was as long as its head and half of its body; and its body was as long as its head and tail together. How long was the fish?

428. What was the cause of Ponce de Leon's "disgrace"?

429. Were the *mandata* which Caesar sent to Ariovistus, written or verbal? Could Ariovistus read?

430. LITERARY ENIGMA.

My whole, composed of 157 letters, is some good advice by an English author, probably familiar to many school children.

My 151, 127, 15, 55, 131 is the *nom de plume* of Mrs. G. R. Alden.

My 17, 74, 71, 145, 11, 103, 116, 150, 108, 100, 129, 144, 17, 22, 61, 93 is one of her books.

My 37, 14, 53, 17, 69, 122, 91 is a book by Henry Ward Beecher.

My 18, 77, 146, 125, 121, 93, 131 is one of the ancient classics.

My 100, 107, 114, 113, 73 is the author of the above.

My 11, 29, 19, 18, 30, 27, 25, 26, 8, g, 21 is a poem by an English authoress.

My 2, 86, 74, z, 52, 32, 31, 34, 89, 32, 60, 63, 97, 98, 99, 130, 144, 40, 17, 111, 87, 36, g is the authoress referred to.

My 61, 73, 39, 60, 104, 108 is an American poet.

My 45, 46, 52, 53, 86, 107, 56, 57, 64, 67, 73, 85, 106, 108, 110 is the author of *Jane Eyre*.

THE KINDERGARTEN.

THE LIVELY GROCERS.*

BY ELEANOR BEEBE, BLIND INST., LOUISVILLE, KY.

I.

We are lively grocers,
 Busy all the day
 Selling, buying, weighing, filling,
 Working away;
 Pure shall all our goods be,
 Prices always fair;
 Call on us, and we will quickly
 Serve you with care.

II.

I am scooping sugar,
 Putting up some tea,
 Weighing butter,—cheese I'm cutting,—
 Fine eggs have we,—
 Measuring potatoes,
 Syrup jugs I fill;
 Rolling barrels, changing money,—
 Making out a bill.

(Repeat Part I.)

* Part I. is sung in concert. Part II. the children sing in turn, with appropriate motions.

THE HEART OF CHILDHOOD.

How should the heart of a little child be?
 As pure as the lily that blooms on the lea,
 As clear as the dews from the heavens that fall,
 As true as the mirror that hangs on the wall,
 As fresh as the fountain, as gay as the lark
 That trills out its song 'twixt the day and the dark,
 As glad as the angels, when soaring they fly
 On the bright wings of love to their home in the sky.

COLORING CRAYON is an important factor in a kindergarten.

DEFINITENESS of purpose is as necessary in the kindergarten as in the schoolroom; aimlessness in the development of exercises in the former leads to lack of stability of character and inability to embrace school-work when kindergarten days draw to a close.

PICTURES and blackboard sketches are very important aids in the instruction of young children. In early childhood the eye is a more prominent channel of knowledge, even than the ear; things rather than words, at this stage, are the instruments of instruction.

MRS. LOUISA P. HOPKINS, in her recent address before the Massachusetts Teachers' Association, emphasized the principles of the kindergarten, and said that "in early childhood the germs of character are set." This is the time to direct the tendencies of both mind and heart, and to prepare the soul to welcome truth and goodness, to lay deep the foundations, on which the future character may be built in beauty and strength.

ONE of the greatest obstacles in the past in this country, in the way of the progress and adoption of the principles and methods of the true kindergarten, as developed by Froebel and his faithful disciples, has been the want of preparation of many who have assumed to do the work of the "*Kindergarten*" No one can teach well what she does not know thoroughly. The child is to be developed by this system, physically, morally, and spiritually, by means of symbols, in accordance with the law of unity, which will result in harmonious development, leading to unconscious activity of all his natural powers. The simple statement of the theory and demands of this education, involving as it does the discipline of the will, the culture of the intellect and the building of symmetrical character, would seem to be sufficient to warn any one from undertaking such a work, who does not understand its aims and high purposes. Observation, and the testimony of many reliable witnesses, confirm us in the opinion that very many have undertaken this work who lack a comprehensive knowledge of its principles and methods.

A KINDERGARTEN STORY. — THE LITTLE FAIRIES.

BY MISS J. B. F., NEW JERSEY.

A LARGE, round, red apple lay on a fruit-stand, temptingly near to where Johnnie had stood all day with his bundle of papers under his arm. Johnnie had not always lived in the city and sold papers in the street.

He could remember when he lived in the country, and had as many apples as he wanted that grew on their own farm, and he thought he knew a great deal about them. He knew so much that had any one asked him he would have told them that this particular one was a Baldwin, and would have added, "A splendid one, too."

But there was something about it that, as much as Johnnie knew, he never guessed, for away in the heart of it there were ten little fairies that were only waiting for the chance to do something wonderful.

Fortunately some one knew they were there, and was willing to help them.

While Johnnie was still watching the apple and crying his papers to the passers by, a lady came along and bought it, saying, "It will be just the thing for my little boy to take to kindergarten to-morrow for his lunch." When the teacher saw it the next day she said, "It is such a nice apple we will save the seeds and plant them." The little seeds were very glad when she said this, for they thought, "Now the little fairies that are in us can grow and be something."

So the teacher put them down in some dark earth in a pot, for the little fairies cannot stand much light at first, and gave them a drink every day, for they are very thirsty little people. Did not those little fairies grow?

Why they could almost feel themselves getting larger and larger, and by and by they were so strong that they burst open the doors of their little brown houses.

They had never been able to do this before, they had been so small, but now they felt strong enough to do anything. But when they opened the door it was dark, and they could not see which way to go; but they kept pushing around till they found a place where the earth was softer. Then there was a little more pushing, and growing a little taller, till at last each one came right out into the air and sunshine.

At first they could hardly see, the light was so bright, but as they became used to it they began to look around; but they looked at each other more than at anything else, for each one had come out a slender little body, with a pair of light green wings.

You may be sure the children of the kindergarten were glad when they saw them coming up, for they had waited a long time for them.

When the little fairies had admired themselves they began to look around, and then they saw how much smaller they were than the plants near them. For a long time they did nothing but grow day and night until they became so large they had to be taken out of the pots and planted in the ground. If you want to know what the little fairies became when they were older, go into the country some beautiful May-day. There you

will see large bunches of pink and white blossoms, which the farmers call apple trees in full bloom, but which you and I know are the little fairies grown up.

STICK-LAYING.

[From Froebel's *Kindergartenwesen*.]

BY LUCY WHEELOCK, BOSTON.

LET us enter, dear reader, a Froebel kindergarten. Here we shall find ten, twenty, or forty children seated at long tables. They greet us with a song of welcome:

"We greet you! we greet you!
And gladly welcome you."

The kindergärtnerin.—"The children are right. I join in the welcome. You have come at the right time, for we are just beginning a new play."

"That is well. Be seated, dear reader. Here is room for us."

The kindergärtnerin.—"I am only afraid that the play may seem too insignificant and simple to you. We are beginning the stick-laying. I was just taking out one stick as you entered."

"Very good. We have come at exactly the right time, as you said; for everything of consequence, if one traces it to its beginning proceeds almost always from the insignificant."

NUMBER. BADLAM'S AIDS to NUMBER.

Teachers' Edition, 1 to 10. Oral Work. 25 cards with concise directions. Prepared to aid pupils in sight-work with objects, and to lay the foundation for a definite and comprehensive knowledge of number. They call for intelligent expression of thought on the part of the pupils. The questions upon the back of each card will suggest to the teacher the work to be done by the pupils.

Introduction price, 30 cts.

BADLAM'S AIDS TO NUMBER. *Pupils' Edition*.

Written Work, 1—10. This serves as a supplement to the Teachers' Edition; and furnishes in a neatly bound pamphlet duplicates of the groups of objects found in the Teachers' edition, with an abundance of material for slate work, as a means of teaching the written expression for the oral work with which the pupils have become familiar.

THE DU SHANE DRILL TABLET. Consists of a series of neatly and firmly bound cardboard leaves or tablets, set in a wooden case, so that they may be rapidly raised or dropped at the pleasure of the teacher. On each leaf is printed in bold type two figures. All the possible combinations of the nine digits are thus given, by means of which the pupil learns to read at sight the sum, difference, product, or quotient of any possible combination of digits, and lays the foundation for becoming an expert accountant. Introduction price, \$3.00. Send for full descriptive circular.

D. C. HEATH & CO., Publishers, BOSTON, NEW YORK and CHICAGO.



Important Reprint.

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JOHN AMOS COMENIUS.

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C. W. BARDEEN, Publisher, Syracuse, N. Y.

nificant, and the manifold from the simple, even the heavenly from the earthly, because it contains the heavenly in itself. I always think of this when my boy cuts his reed flute in the spring, and then I go to church and hear the great organ and the choral, and see as altar-piece the picture of the holy Cecilia gazing enraptured toward heaven. This is because the purely simple and childlike leads in its steady unfolding to a heavenly fulfilment. Our visit to the kindergarten to-day will not prove this to us, indeed; but it is a beginning. I am sorry to have detained you so long, dear kindergärtnerin. Pray continue."

K.— "Ready children, one, two, three,
Ready for our work are we."

"What have I in my hand?" *Children*.—"A little stick." "How does it look?" C.—"Straight and long." "Do you know any other things which are straight and long?" C.—"Yes; that, that," etc.

K.—"Notice what you can, and later you shall show me. What is my stick doing?" (She places it vertically on the table.) C.—"It stands." "Do you know other things which are straight and standing?" C.—"Yes; that, and that." "Soon you shall show me. Now what is my stick doing?" (She places it horizontally on the table.) C.—"It is lying." "Do you know other things which are straight and lie?" C.—"Yes, yes."

"You shall now have, every one, a new, smooth stick to play with." The sticks are distributed by several children. "You may all think of what your stick reminds you; of what it is a picture. My stick is a tape-needle." As the kindergärtnerin says this, she lays her stick on the table saying, "What do I see in this stick?" *All*.—"A tape-needle." *To the first child*.—"And you?" "A, darning-needle." The kindergärtnerin lays a second stick near the first and repeats, "a darning-needle." "What do you see in this stick?" *All*.—"A darning-needle." So the work was continued until twenty or more sticks were lying in the middle of the table.

"Now we will see whether we can remember all these things. You must all see that yours is not forgotten." As the sticks are indicated the children say, "A tape-needle; a darning-needle; a match; a slate-pencil; a whip a ruler; a lead pencil; a pin; a cane; a candle," etc.

"Can you now show me where each object lies?" "Yes! yes!" "Who has the match?" "I." "Where is it?" "Here." "Who has the round of a ladder?" "I," and so on.

And now the believing reader has the confirmation of his belief, and the doubter, the proof that from the separate and individual in the kindergarten proceeds the manifold, one might almost say from nothing comes something. At the beginning each child had hardly one clear

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icture in his mind; now he has twenty or more made outwardly visible and named. Have you noticed how eagerly each child watched the others to see that no one mentioned what he had in mind? It would be easy to increase the twenty representations by twenty more. Into what different directions and phases of life has the child been led? It always seems to me when I visit a kindergarten that I come out again as a pupil. So I have learned something to-day. And what is it? I have felt, first, that the memory and faculty of representation are essentially quickened by this occupation, and long-forgotten pictures reappear in full freshness and life. Secondly, the power of comparison is exercised, similar things unconsciously arranging themselves together. Thirdly, the circle of ideas and perceptions is enlarged. Lastly, the power of perception and comprehension is sharpened.

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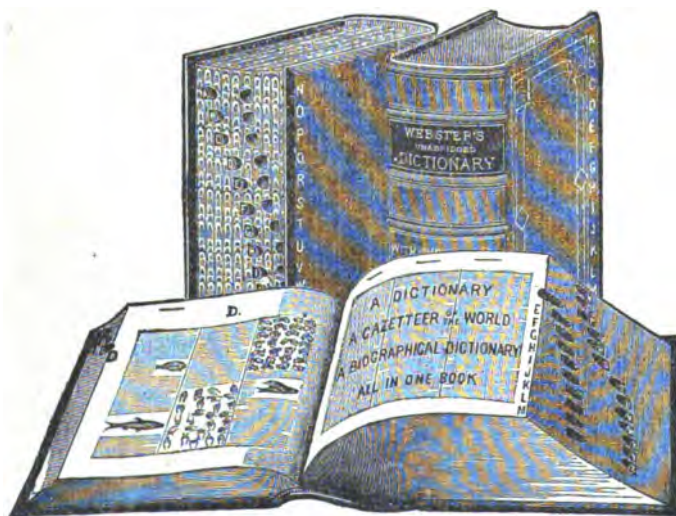
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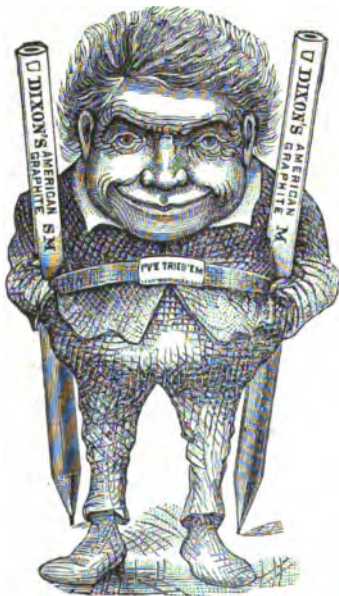
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INTERESTING.

MR. EDITOR:—When, where, or by whom the original of the accompanying letter, which I found this morning while looking for some mislaid papers, was written, I do not know; but along with the pleasant memories of the quiet summer days spent in the old Governor Dummer mansion at Byfield, where it was first shown me, came the thought that it might be made of use by some teacher in reviewing her classes in arithmetic, and I venture to send it to the TEACHER.

Yours truly, E. E. ARMES.

Fitchburg, 1888

THE SCHOOL TEACHERS' LETTER.

Mr. Five Quarters Wood:—Your "who, which, and that" came to see me the other day, when the most extraordinary "word connecting sentences" of circumstances took place—but I must recount the facts, in order that you may see the "position without any magnitude" of my story.

They had brought with them a most beautiful "21 shillings" hen intended as a present for a friend. During the night it escaped into the public "12 ounces," where had been left some "1/3 of an inch" poisoned, for the purpose of killing the rats, at which it began to "eight quarts." As matter of course a "—" was put to its existence.

They were much disturbed to find it gone, and made no "twenty grains" to hint that a distinguished and exiled "five and a half

yards," who was staying with me, knew about it. Of course I was shocked at so "12 dozen" an insult to my friend the "five and a half yards." It incensed me to that "380th part of a circle" that I thought it would not be "40 rods" to order them out of the house. They might as well have accused me of being in "three miles" with two rogues.

Happily the keeper of the "21 shillings" hen, who is a leader of the "24 sheets," found the body, brought it to my house, and explained the matter. Your "who, which, and that" apologized to me, and to my friend the "five and a half yards." We smoked "two hogsheads" a piece, and happiness was restored.

I am well except a "4 roods" in my lower jaw. Business is good, the "1/16 of a cent" is running again, every "4 inches" is employed.

Yours truly,
JAMES "THREE BARLEYCORN WITH-
OUT ANY HAIR."

Mr. Editor:—Which is it proper to say; I think it is not so, or, I do not think it is so? PERPLEXED.

"I think it is not so" is agreed by all parties to be the correct expression. Some affirm that it is correct although inelegant to say "I do not think it is so." There are no critics of the former expression; there are bitter critics of the latter. We think it hyper-criticism and very largely a waste of energy that might be better employed. The fact is, we do think something; it is equally true that we "do not think it is so."

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Entered at the Post Office at Boston, Mass., as second-class matter.

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LANGUAGE LESSON.

BY M. T. P.

TO THE TEACHER:—Suppose you use this picture, not in the usual cut-and-dried manner of requiring a sentence from each scholar of what each sees in the picture, but in a way to develop imagination and consecutive thought by asking for a story, a real story, made up from the picture itself. It does not demand much mental development or acumen in a child to say, "I see a dog," "I see a little girl," or "There is a fence back of the house;" and there is little real advance made in the study of language, enlargement of the vocabulary, or continuity of thought or expression. Let the picture excite in the minds of the children the germ of a story, and let this grow at will and as imagination prompts. Have first a careful study made of the picture, and if necessary a few statements made of the objects in it, then invite reflection and let imagination have free course and be amplified.

At first some of the stories will be startlingly crude, and brief, with repetitions; but by degrees these faults will be eradicated and a language lesson will become a real source of pleasure, profit, and by no means a misnomer.

Once upon a time, little Effie had given to her a pretty, curly-haired puppy. This she liked very much, and fondled it very often. She took good care of her little pet, and she gave it a saucer of milk to eat whenever she had her

meals at the table. She washed it, combed out its curly hair, and tied a blue ribbon around its neck. A long time was spent in finding a name for it, and what do you suppose was the name she finally gave it? I don't think you could ever guess, so I will tell you. She called it "Uncle John." Wasn't that a funny name to give to a little dog? I will tell you why she took this name. Her papa's big brother was away on the sea, a captain of a ship, and he was Effie's best friend next to her own dear father and

mother. She was always thinking and talking of her Uncle John, and wanted to see him very much. But he had been away a long time and was not expected home for several months, and she was very "lonesome," she said, for a sight of her dear, dear, Uncle John. What better name could she think of to give her pet than that which she had most often in her thoughts? So she called the puppy "Uncle John."

One day a neighbor's big dog came to her door and began to play with "Uncle John," and when Effie saw this she was afraid that her pet would be hurt by the big dog, so she took "Uncle John" up

in her arms, and holding him up as high as she could, said to the big dog, "Now you go right away home, as fast as you can. Uncle John does not like you, and he is afraid of you." When the big dog heard this he stood still a moment as if he understood it all, then gave a low bark, wagged his tail and sat down on the door-step. By these ways he meant to say to Effie, "Don't be afraid of me. I was once a little fellow like 'Uncle John,' and I won't harm him. Let me be his friend too." Effie seemed to



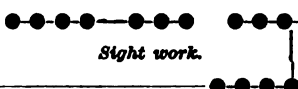
understand him, for she put "Uncle John" down by the side of the big dog, and they ever after that were great friends. "Uncle John" grew to be a big dog, and was Effie's friend as long as he lived.

NUMBERS ABOVE TEN.

BY ANNA B. BADLAM.

Lesson IV. — The Number Fourteen.

[Concluded.]


VI. 

a. 1st Oral Expression: Seven and seven are fourteen; seven from fourteen will leave seven.

b. 1st Written Expression: $7 + 7 = 14$; $14 - 7 = 7$

c. 2d Oral Expression: Two 7's are fourteen; there are two 7's in fourteen.

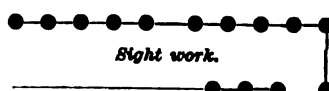
d. 2d Written Expression: $\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$; $7)14(2$

VII. 

a. Oral Expression: Seven and seven are fourteen; seven from fourteen will leave seven; seven 2's are fourteen; there are seven 2's in fourteen.

b. Written Expression:

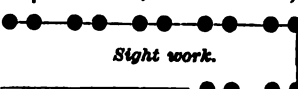
$$7 + 7 = 14; 14 - 7 = 7; \begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}; 7)14(2$$

VIII. 

a. Oral Expression: Eleven and three are fourteen; three and eleven are fourteen; three from fourteen will leave eleven; eleven from fourteen will leave three.

b. Written Expression:

$$11 + 3 = 14; 3 + 11 = 14; 14 - 3 = 11; 14 - 11 = 3$$

IX. 

a. 1st Oral Expression: Twelve and two are fourteen; two and twelve are fourteen; two from fourteen will leave twelve; twelve from fourteen will leave two.

b. 1st Written Expression:

$$12 + 2 = 14; 2 + 12 = 14; 14 - 2 = 12; 14 - 12 = 2$$

c. 2d Oral Expression: Two 6's and two are fourteen; two and two 6's are fourteen; two from fourteen will leave two 6's; two 6's from fourteen will leave two.

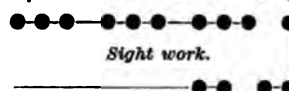
d. 2d Written Expression:

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} + 2 = 14; 2 + \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 14; 14 - 2 = \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}; 14 - \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 2$$

e. 3d Oral Expression: Six 2's and two are fourteen; two and six 2's are fourteen; two from fourteen will leave six 2's; six two's from fourteen will leave two.

f. 3d Written Expression:

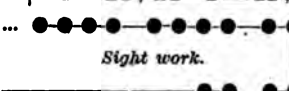
$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} + 2 = 14; 2 + \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 14; 14 - 2 = \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}; 14 - \begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} = 2$$

X. 

a. Oral Expression: Four 3's and two are fourteen; two and four 3's are fourteen; two from fourteen will leave four 3's; four 3's from fourteen will leave two.

b. Written Expression:

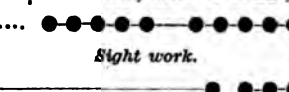
$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} + 2 = 14; 2 + \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} = 14; 14 - 2 = \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}; 14 - \begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} = 2$$

XI. 

a. Oral Expression: Three 4's and two are fourteen; two and three 4's are fourteen; two from fourteen will leave three 4's; three 4's from fourteen will leave two.

b. Written Expression:

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} + 2 = 14; 2 + \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} = 14; 14 - 2 = \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}; 14 - \begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array} = 2$$

XII. 

a. Oral Expression: Thirteen and one are fourteen; one and thirteen are fourteen; one from fourteen will leave thirteen; thirteen from fourteen will leave one.

b. Written Expression:

$$13 + 1 = 14; 1 + 13 = 14; 14 - 1 = 13; 14 - 13 = 1$$

WASHINGTON'S PORTRAIT.

In the February number of the AMERICAN TEACHER, in Miss Wheelock's Washington's Birthday article in the Kindergarten Department, reference was made to the figure of Washington, published by Mr. Baird of Boston. Miss Wheelock says in reference to it: "The possibility of the utter disappearance of the Father of his Country from the market never occurred to me." They had gone out of print, and a good number of our subscribers ordered them of Mr. Baird, who was in blissful ignorance of the cause of the call made upon him. Miss Wheelock, Mr. Baird, and the editors of the AMERICAN TEACHER: I regret the disappointment caused our readers by this failure of the supply.

A SUPPLEMENT TO THE OBJECT METHOD OF DRAWING.

BY D. R. AUGSBURG,
State Normal School, Kutztown, Pa.

AS a supplement to the Object Method of Drawing, which appeared in the March number of this paper, the following examples are given to aid the student in becoming familiar with the three kinds of lines spoken of in that article; also to gain a better understanding of the essential laws that govern the drawing of a solid, and to improve the eye in judging distances.

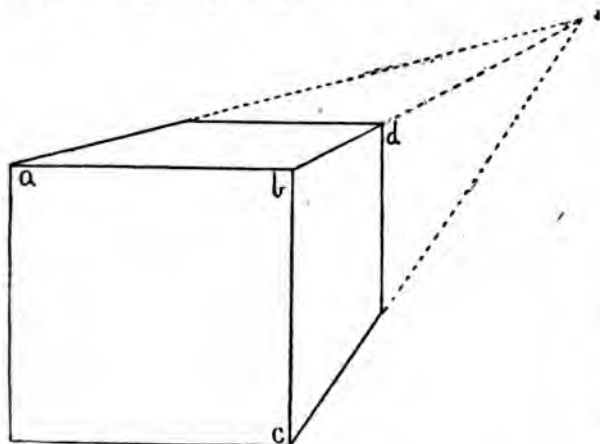


Figure 1.

The lines spoken of in the former article are the horizontal, vertical, and receding lines. The horizontal lines are all parallel with the bottom of the paper on which the drawing is made, the vertical lines are parallel with the side, and the receding lines are all drawn to the point marked x in the examples.

On the blackboard, or a common scratch-block, draw a

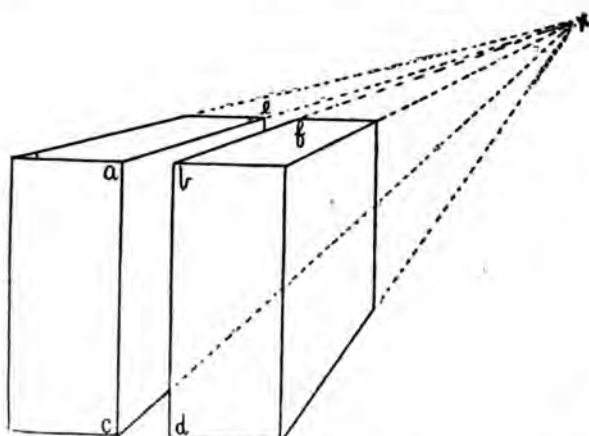


Figure 2.

square or rectangle; at the right and above this figure place a dot, as x , Fig. 1. It does not make any difference where this dot is placed; it may be above the square or below, on the right or on the left, anywhere; but wherever

it is placed it marks the center of the drawing, or picture, and the level of the draughtsman's eye.

To this dot all the receding lines in the examples given below are drawn. In these examples all the distances are taken, and depend entirely on the judgment. This need not lead to discouragement, for, with a little practice, this difficulty disappears.

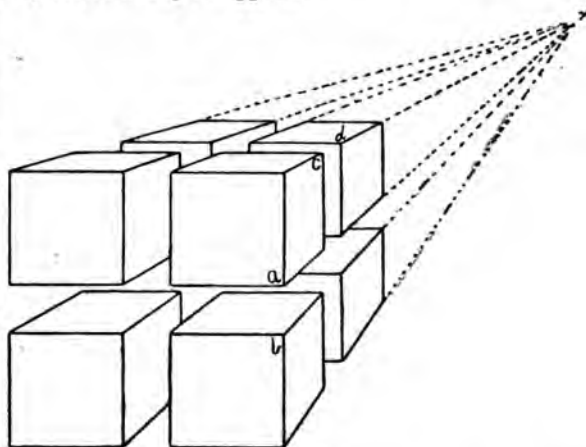


Figure 3.

From the points a , b , and c draw light lines to the point x . On bx take the point d , and from it draw a vertical and horizontal line until they intercept the lines ax , and cx , which furnishes a box or cubical solid.

In Fig. 2 take two points, as a and b , and from these points draw vertical lines to c and d , and receding lines to x . Erase the lines ab , cd and ef .

Notice that every corner has three lines running from it,—a vertical, a horizontal, and a receding line. Ana-

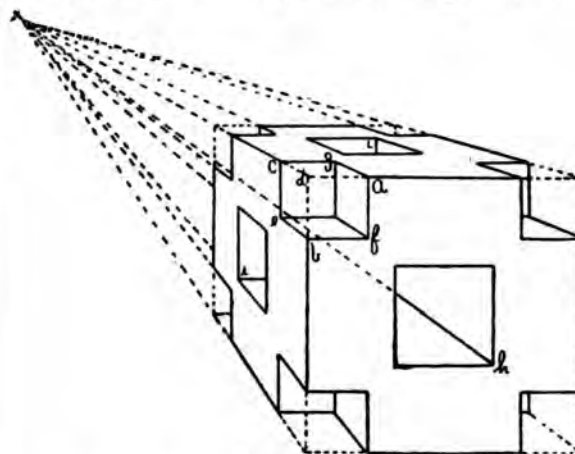


Figure 4.

lyze each corner, and if one of these lines is needed, supply it. Of course, if the line from the corner is behind the solid where it cannot be seen, there is no need of drawing it, as in d , Fig. 2. By drawing a receding line from the corner c , and a vertical line from the corner e , the solid is divided into two parts.

In like manner the solid may be divided into four parts by drawing horizontal and receding lines from the points

a and b , Fig. 3, and then erasing and supplying the needed line as in Fig. 2; also into eight parts by drawing vertical and horizontal lines from points c and d .

Fig. 4 represents a solid from which a cubical block has been cut from each corner.

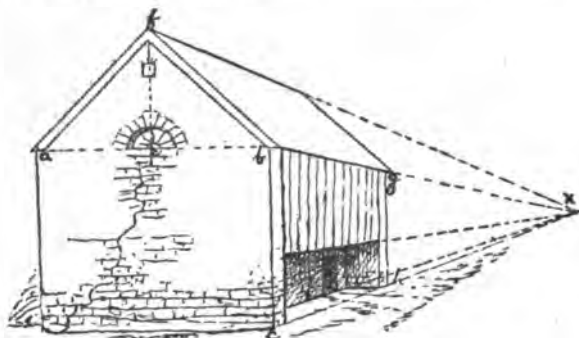


Figure 5.

Draw a solid similar to Fig. 1. From point a , Fig. 4, draw a vertical and a receding line; from point b a horizontal and a receding line; from point c a vertical and horizontal line. Erase da , db , and dc . From point g draw a vertical line, from point e a horizontal line, and from point f a receding line, and the block is removed. In the same way the blocks may be removed from each corner of the solid.

A square hole may be made in the sides by drawing a receding line from h , a vertical line from l , and a horizontal line from i .

Fig. 5 is a practical application of these principles in drawing buildings. Commence by drawing the rectangle $abcd$. Bisect ab at e , and erect the vertical line as high as you may wish to the point f . From f , b , and c draw light lines to x . On the line bx take the point g , and from it draw the vertical line gh , and draw the line gi parallel with bf . The recess in the side of the barn is made in the same way that the cubes are removed from the solid in Fig. 4.

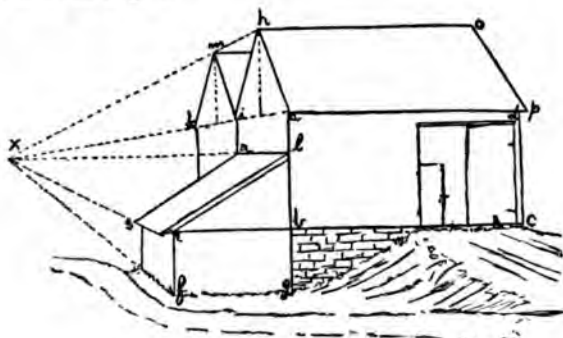


Figure 6.

Commence Fig. 6 by drawing the rectangles $abcd$ and $befg$. From the points f , e , l , and a draw receding lines to x . On the line ax take the points k and i . Bisect ai and ik , and from the points bisected draw vertical lines. On the first of these lines take the point h as high as you may wish to have the roof. Draw the receding line hx , which will determine the point m . Make the line op slant a little more than the line ah . The

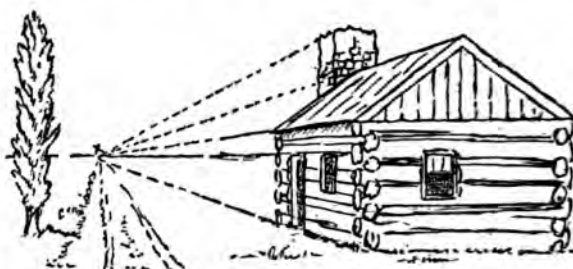


Figure 7.

point r is found by drawing a vertical line from the point i , and the line rs by drawing it parallel with le . The remaining lines are all so simple that an explanation is unnecessary.

Fig. 7 is made in the same way as Fig. 5. Fig. 8 is carried still further, but the principles are the same, and will need no explanation.

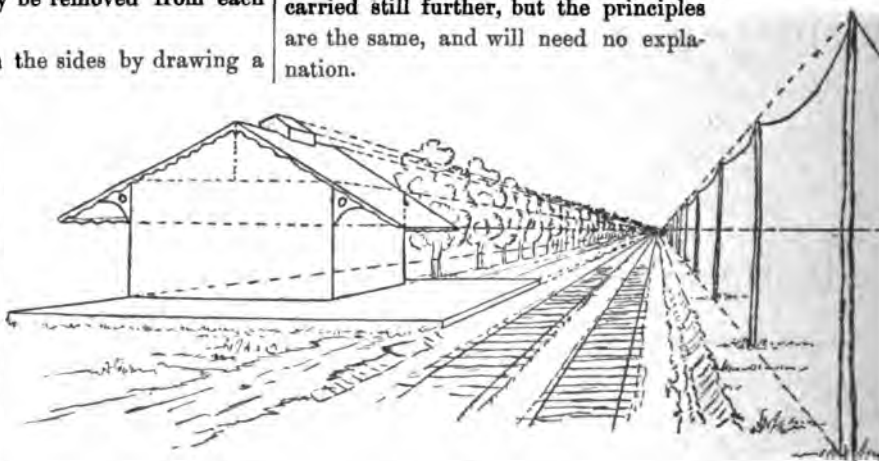


Figure 8.

The few hints given in this article are not intended as a system of drawing, but simply to show an easy way of gaining results that would otherwise take much study and practice to accomplish. To those who wish to become good draughtsmen, these general suggestions are given:—

Draw from the real object to gain the ability to reproduce what you see. Copy the drawings of good artists to gain the ability to reproduce what you see in the best manner. Study methods to gain the ability to reproduce what you conceive in your mind easily and intelligently and, lastly, never lose sight of the fact that it is not so much the want of skill, as it is the culture that makes the skill.

HAVE abundance of good paper for the pupils.

MEMORY GEMS FOR APRIL, 1888.

BY SUSAN TRUE, SALISBURY POINT, MASS.

MONDAY, 2D.

ALL things bright and beautiful,
All creatures great and small,
All things wise and wonderful,—
The Lord God made them all.

—C. F. Alexander.

TUESDAY, 3D.

When angry, count ten before you speak; if very angry, a hundred.—*Thomas Jefferson*, 1743; *Hans Christian Anderson*, 1805.

WEDNESDAY, 4TH.

Nothing grand or beautiful grows,
Save by gradual slow degrees.

THURSDAY, 5TH.

What can a little child give God?
From his bright heaven above
The great God smiles and reaches down
To take His children's love.

FRIDAY, 6TH.

Kind hearts are the gardens,
Kind thoughts are the roots,
Kind words are the blossoms,
Kind deeds are the fruits.

MONDAY, 9TH.

Love is the sweet sunshine
That warms into life;

For only in darkness
Grow hatred and strife.

TUESDAY, 10TH.

Echo not an angry word;
Let it pass!
Think how often you have erred;
Let it pass.

WEDNESDAY, 11TH.

Rise up before the aged one,
And show the reverence due;
His race of life is nearly run;
Your life is fresh and new.

THURSDAY, 12TH.

Be you to others kind and true,
As you'd have others be to you;
And neither do nor say to men
Whate'er you would not take again.

—J. Watts.

FRIDAY, 13TH.

Turn thine eyes to earth and heaven,
God for thee the spring has given,
Taught the birds their melodies,
Clothed the earth, and cleared the skies,
For thy pleasure or thy food;
Pour thy soul in gratitude.

—Mary Howitt.

MONDAY, 16TH.

So, let your faults be what they may,
To own them is the better way.

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19 Murray Street, NEW YORK.

TUESDAY, 17TH.

Though many be more rich than we
In all this great world's wealth by far,
We may possess a name no less
In worth than gold or rubies are.

WEDNESDAY, 18TH.

I must, every day,
Be sure that all I say
Is pure and true.

THURSDAY, 19TH.

Columbia, Columbia, to glory arise,
The queen of the world, and child of the skies!
Thy genius commands thee; with rapture behold,
While ages on ages thy splendors unfold.
Lexington and Concord, 1775. —Timothy Dwight.

FRIDAY, 20TH.

Duty makes as strong a claim
As if an angel called your name,
And all men heard the call.

MONDAY, 23D.

Good name, in man or woman,
Is the immediate jewel of their souls. —*Shakespeare.*

TUESDAY, 24TH.

Should a quarrel arise, whate'er be the cause,
What is better by far than a whole book of laws?
It is the sweet practice, we very well know,
Of always returning "a kiss for a blow."

WEDNESDAY, 25TH.

Little children, love each other
Show true love to great and small;
Love your father and your mother,
And love God the most of all.

THURSDAY, 26TH.

Keep pure thy thoughts,
Keep good thy will,
Keep kind thy tongue,
Keep passion still.

FRIDAY, 27TH.

Keep doing good,
Keep helping needs,
Keep high thy aims,
Keep pure thy deeds.

MONDAY, 30TH.

Do at once what you're to do,—
Time doth pass away.

THE teacher needs good supervision for her comfort and success. You may wisely complain of the quality of some supervising, but never complain of the principle of supervision.

PLACE the good of the profession above your own personal interest, and your own interest will gain thereby. The teacher who is selfish is the one who misses both success and comfort.

YELLOWSTONE PARK.

Teachers *en route* to the annual meeting of the National Educational Association to be held at San Francisco, July 17th to 20th, 1888, should see that the RETURN PORTION of their tickets, as issued them at Council Bluffs, Pacific Junction, Atchison, Kansas City, or St. Louis, READ FOR THE RETURN TRIP from SAN FRANCISCO via THE SHASTA ROUTE, (the all rail line between San Francisco and Portland, Ore.) PORTLAND, TACOMA, and the NORTHERN PACIFIC RAILROAD. This is the ONLY ALL RAIL LINE to the YELLOWSTONE NATIONAL PARK, and the only one of the TRANS-CONTINENTAL lines running DINING CARS.

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GRAND TEACHERS' EXCURSION

TO THE
Annual Meeting of the National Educational Association,
TO BE HELD AT
SAN FRANCISCO, CAL., JULY, 1888.

A SPECIAL TRAIN OF PULLMAN CARS will leave Boston, Friday, July 6, in the afternoon, running through to Niagara Falls, arriving there for breakfast next morning, the 7th, where special rates have been made for *this excursion* for carriage hire and tolls. The day will be spent there, and the train will leave in the afternoon in season to reach Chicago for breakfast on Sunday, the 8th, and the day will be spent there, leaving in the evening about 7.30, running through to Denver via Council Bluffs, and Omaha, reaching the former place on Tuesday, the 10th, in the morning, where a stop of two or three days will be made to give the Excursionists an opportunity to visit *all* places of interest, Colorado Mountains, Manitou, Colorado Springs, Garden of the Gods, Pike's Peak, Clear Creek Cañon, Georgetown, Leadville, Black Cañon, Marshall Pass, Silver Plume, etc., etc.

It is understood that special Low Excursion Rates will be made from Denver to all of the above places. Leaving Denver, the route will run along the base of the Rocky Mountains to Cheyenne, crossing the Rockies at Sherman, where is situated the famous Ames Monument, and passing through Laramie, Rock Creek, Fort Steele, Rawlins, Rock Springs, Greene River, Evanston, and the grand and magnificent scenery of Weber Cañon, with its Devil's Slide, etc., etc., and Ogden to Salt Lake City, where the Sunday can be very pleasantly spent in the churches, visiting the Lake, the Tabernacle, Tithing House, Brigham Young's Grave, Fort Douglass, etc., etc.

Leaving Salt Lake City on Sunday evening, passing Kelton, Palisade, Battle Mountain, Winnemucca, Reno, and over the Sierra Nevada Mountains, via Sacramento to San Francisco, they arrive there on Monday, the 16th, in the morning,—the first session of the National Educa-

tional Association opening on Tuesday the 17th, and continuing through the week.

Special low rates have been made to visit all places of interest on the Pacific Coast, Yosemite, Big Trees, Monterey, Santa Cruz, and Southern California.

The rate for tickets from Boston from San Francisco and return, good for 90 days, from July 1, or thereabouts, good to return same route (or others to be hereafter designated), will be, as near as can be learned at present, \$93.75. Pullman Car fare for double berth, suitable for two persons, from Boston to San Francisco ONLY, \$21.00; Section, \$42.00; State Room, \$79.00 (accommodating five persons).

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AMERICAN TEACHER.

VOL. XI.

Devoted to the Methods and Principles of Teaching.

No. 10.

THE PROBLEM.

BY CARRIE SHAW RICE.

"NOW come ye," quoth the Master,
"Now come ye, one and all
To solve the problem I will give
Alike to great and small."

And then he gave the problem,
A wonderful one, I ween,
And bade them solve it on a board,
The largest ever seen.

And the children all went forward,
To solve the wonderful sum,
And millions stood at the blackboard,—
And millions are yet to come.

Some made glorious figures
With beautiful curves and signs;
And some made hideous blunders
With crooked, horrible lines.

Some, who commenced in earnest
Grew hasty and tired so soon,
That the beautiful work of morning
Was blotted and soiled by noon.

And some as the shades of evening
Grew nigh, cried out in pain,
"Ah! now I could solve the problem,
Could I but begin again."

And still they worked at the blackboard,
While millions looked to see,
And the Master saw each figure,
And never a word spake he.

And lo! the girls grew women,
Fair as the radiant sun,
And the little boys were bearded,—
Still was the task undone.

For still it grew stranger and deeper,
And nearer the great throng pressed,
To see the wonderful problem,
And he who should solve it best.

And the workers there at the blackboard,
Grew weary and bent with years,
And the board was white with figures
And dampened with many tears.

At last, when their failing vision
Grew dim in the waning light,
They knew that the answer was coming
And shivered in vague affright.

Then Death came in at the door-way,—
The Master rose in his place,—
"The children have solved the problem,
I see by each tranquil face.

"By the grace of God, I, therefore,
The great King Death, proclaim
The long, long problem's answer,
And the worker's age and name.

"And every vice and virtue
Of their lives is here unfurled,"—
For the children solved the sum of life
On the blackboard of the world!

PERSONAL ADAPTATION OF TEACHER TO PUPIL.

BY SUPT. CHARLES JACOBUS, NEW BRUNSWICK, N. J.

A COMMON FAULT is the lack of personal adaptation of the teacher's knowledge, experience, and tact to the conditions or needs of the pupil. We teachers are so rigid, so inelastic; we so much delight, apparently, to have the angularities prominent. We are like a square cork; or, better still, a triangular cork in a round hole; there is contact, or touch, only in a few places; and, by the way, the word *tact*, itself,—that mysterious, comprehensive, yea, measureless word,—is only another form of the word "touch" (through the Latin, *tango*,—*tact-um*, to *touch*). We are evidently afraid that our dignity will disappear, that our honor will be compromised, or that it is wrong ever to indulge in pedagogical condescension, forgetting the example of the great Teacher. We don't do so with material things, and why should we be so unyielding with regard to the natures with which we have to deal?

I stood at a carpenter's bench as he was pushing a jack-plane, removing the roughness from some boards, to prepare them for further use. Finishing one, he placed another on the bench, and, after one laborious movement of the plane, with a seeming choking of the tool, stopped, and, with considerable effort, turned the long board end for end.

If inquiry had been made as to the reason of this, he would have said something like this: "The *nature* of this board differs from the one just finished, and in order to obtain the desired smoothness I must place it, or work with it, from the other way, in exactly the opposite direction. If I had continued planing in the direction in which I at first attempted, the work would have been more difficult, in the *first* place, as I would have been working 'against the grain'; in the *second* place, the board would have been left in a very unsatisfactory condition, if I had

attempted to finish it; and, in the *third* place, it would have added perceptibly to the dullness of my plane."

Is there not a thought here, fellow teachers, that may be helpful to us in our work? Is there not such a thing as working "against the grain" with children? And do we not often persist in it, even when we know we are doing so? The carpenter could have changed his own position instead of that of the board. So, frequently the teacher shows the greatest wisdom, not by clinging to a method which may have worked well with one pupil, but by changing his own position and *adapting* himself and his instruction to the peculiarities of his pupils.

INFLUENCE OF VOCAL CULTURE.

BY MRS. H. B. B. LORD.

WHEN a child first listens to its mother's voice it has, without doubt, some power to discriminate to a limited extent between a harsh, commanding tone and a pleasant, persuasive one, for how often do we see the pained, grieved look when a little child (a babe, even,) hears the sound of a loud, discordant tone uttered by an unthinking person in whose care the child is placed. How soon the little child learns to love the pleasant tone and to fear and dread the unpleasant one!

But some one at my elbow says, "Our voices are just what are given us to use in speaking." This we know; but we know, too, that every faculty which is given us may be improved by care and cultivation. Sometimes we meet with a woman who has a loud, harsh, masculine voice, naturally, and such a voice it may be very difficult to change *very* much, yet vocal training will modify harsh tones in *all* cases, and with care and attention this same harsh voice may become quite agreeable.

"We are teaching for the future," says a recent eminent educator. And we can hardly expect immediate fruit from some of our most patient labor. These pupils of ours will soon be in *our* places; and we often find, in families where there is but little book knowledge, a degree of refinement that is very pleasing. It is usually found that the mother controls her family by a sweet tone, and many times the combined influence of father and mother is felt in this same pleasant tone. A daughter returning from a school where a thorough training in "vocal culture" is insisted upon, oftentimes will bring about a wonderful change at home, transforming the hitherto noisy, loud voices of all in that home to gentle, sweet tones, and agreeable manners. In this way many times wonderful changes are wrought. The influence of vocal culture as a study and daily practice cannot well be overestimated.

I know one woman who has been a teacher for several years in the same school, and whose success as a teacher has been very good; yet a more rude, rough class of

scholars cannot be found than those who attend her school. To be sure some of her scholars came from cultured homes, and these were gentle and refined when they entered her school, and this influence from "home" did not entirely leave them while in school, but they surely gained nothing by their connection with the school in this direction.

I was speaking with the superintendent of schools in the town where this teacher is located, and mentioned this fact of the continued roughness and disagreeable mannerism in her school, and he told me he attributed it wholly to her very discordant tone of voice. "Indeed," he said, "I think her rough voice often challenges a roughness in reply from some of her pupils," and added, "I have urged her to try to cultivate a nicer tone of voice, in vain; she is perfectly satisfied with it, and desires no change, and she is doing our children a great injury by just a bad tone of voice."

Another teacher has been an honored and loved teacher in the last decade in the roughest, hardest school in the same town. Her manner is so gentle, her well-trained voice is so winning and agreeable that the most rude and troublesome scholars she ever has are at once subdued and easily governed. I have never heard her voice raised, nor have I ever heard a disagreeable tone used by her. She attributes her success entirely to the refining influence she has over these rough boys through her voice and its perfect training. Will not all teachers give this subject due consideration?

WORK AND PLAY.

BY MARY M. HALE, PROVIDENCE, R. I.

IN playing upon the lute, it is equally necessary to tune both chords, the treble, and the bass; it would seem at first as if nothing could be more discordant than a high note and a low note, yet by their harmony the most agreeable music is produced, and in the absence of either chord it would be impossible to produce a good result. Now what is true of the lute is also true of the training of children, for we have to deal with two elements of the child's nature, work and play, which, like the chords of the lute, seems to be naturally opposed to each other, but which may be so harmonized as to lead to the freest and highest development of its nature. And they ought to be so harmonized, for education should support development without force or arbitrariness; and how can this be done, but by leading the child to learn while he plays?

The young child must play. Is he not naturally as free and happy as the birds? Then is it just to deprive him of this life? We should take the children as they are with their happy, playful natures, and as Aristotle has said, "Accomplish the work through the play," which is activity intended to awaken, strengthen, and form the powers of its soul.

If you have ever watched a child while at play, you

know that there is no art that is not attempted by it, whether it be pictures in chalk, or buildings in sand, and with its oft-repeated "why" and "how" the young mind strives to get at their origin.

If during his first years at school the child is given objects to handle, he gains a knowledge of form, color, size, weight, and number, and it is only by such experiments that the child can obtain real, useful knowledge. Enter a school, observe how every sound attracts, see how every color, every motion, every new form charms, see with what delight the young lord of the world handles, pulls, breaks, weighs, and measures the materials of his future power; mark the attention with which he listens to the story of the lower or the higher races,—the impatience with which he waits for the teacher's answer to his question,—and then think of how this desire to learn is repressed by many teachers who think that the great ends of teaching are how to read, spell, and cipher; who imprison a child for hours at a time, and compell him to stillness at an age when he never was intended to be still; who put into his hands a book which to the child is impenetrable, and then wonder that he is not as bright and active as when in pursuit of flowers and butterflies. But some persons say the destiny of every child is labor, and that no matter what sphere of society may be his cradle he must make himself master of the world by his own exertions. They say that making everything easy and pleasant for him while he is young is not proper preparation for a life of toil.

It is true that this method does make his school-life pleasant, but does it necessarily make it easy? Which requires more real and profitable labor from a child,—to gain knowledge from a book, or to find this same knowledge for himself by using his own powers of mind?

"Poor Humanity!" exclaims Madame De Staël, at the sight of all the manifold miseries of mankind, but with much more truth we might exclaim, "Poor childhood!" for in childhood and its perverted management lies the source of the greater part of our miseries.

BUSY SCHOLARS.

BY CORA WOODWARD FOSTER.

IF a teacher would have a happy, contented school, easily controlled, she must keep her scholars *busy*. It will not hurt them to work; on the contrary children thoroughly enjoy having something to do. If they are not given some work, they will speedily find occupation of their own that will not suit the teacher. Whoever went into a house where there were little ones, and saw a boy, or even a girl, sit still for many minutes at once with absolutely nothing to do? Give the child a puzzle, or a new book, and he will sit still enough, however. Just so in school; the busiest schoolroom is by far the happiest one. Naturally the older scholars will work, but I think that it

is just as essential to keep even the smallest ones occupied. Why not give them, at the start, habits of industry that will stand by them all through life?

We have all heard the saying, "As the teacher so is the school," and the rule surely applies in this case. The children are not apt to work if the teacher is idle; but if she is occupied, they will catch the spirit and work too.

Perhaps a difficulty will be met with in this line. The children will be so anxious to finish that they will not be careful. This can be avoided if the teacher refuses to look at any work which is hurried and careless. If there are any who will not try to improve and do neat work, have them remain after the others are dismissed, and do the work to suit you.

Then there is another difficulty to be met; there will be one or two who will be sure to finish first. They can think faster than the others. They always know the answers to all the numbers, and never fail to get the coveted one hundred per cent. mark. These ought to understand that they can do something else while waiting for the rest. Perhaps they can make up some work for themselves, or they can copy words or other numbers from the board.

After the children have learned to read and spell a little, there is little trouble in finding occupation for them. Nearly all children like to read, and provided one has books enough for variety, the little ones can amuse themselves for a good part of the time with silent reading; then there is "word-building," which will amuse them at times. Distribute letters printed on separate pieces of cardboard, and words may be formed from these. The words thus made may be copied on the slates, and new words made from the letters. I bought the game of "Anagrams, or Words Alive," which costs twenty-three cents. It contains over three hundred letters, and the letters most used are most numerous. The same idea could be carried out, and each teacher could make her own set of alphabets by cutting letters out of newspapers and pasting on squares of cardboard, but the result would not be quite as neat and satisfactory, perhaps.

For busy work in numbers, my scholars like to make combinations, using wooden toothpicks for objects. A box containing a large number of these can be purchased for five cents, and they are noiseless objects to work with, and useful in more ways than one.

Once in a while distribute papers among the scholars on which a short story has been written. They can copy on their slates, and then read aloud. Sometimes let them write a story of their own. Cut columns from papers, and pass one to each child, telling him to underline a certain word each time he sees it. This will not only teach him the word, but will make him careful. The word for which he is to hunt should be placed on the board.

WAGE eternal warfare on the baneful practice of reading characterless fiction.

FROM A SCHOOL NOTE BOOK.—MY FRIDAY AFTERNOONS.

BY KATE L. BROWN.

WE spent the first ten minutes in song-singing to-day. The older children expressed themselves quite willing to let the little ones choose, and this was very gratifying to the teacher, who was beginning to fear lest some of her flock were growing selfish.

The children decided in favor of "motion songs." So we sang "Schnick Schnack," Reinecke's merry little dancing song, and "Sing-a-song-a-sixpence." Then one child asked the teacher to play a rain-storm on the piano while the school imitated the pattering on the desk. The next half-hour was spent in original story-telling by the children as a language lesson. After the story-telling we reviewed, orally, some of our human body lessons; then came recess.

The older children brought their paint-boxes, and had a lesson in laying on the color. They drew squares and triangles on brown paper and colored them very carefully. During the coming week they are to experiment in mixing to get just the right tint for the maple leaf. The younger children busied themselves in various kinds of hand-work. Some wove mats, some pricked designs on cards, others stitched in outline the designs they had pricked before.

Just before school closed, we played "Sing-a-song-of-sixpence." The four-and-twenty blackbirds flew gayly about, the king counted his money, the queen ate her bread and honey, while the poor little maid out in the garden had a hard time of it.

To-day the children had "The Pied Piper of Hamelin" read to them for perhaps the twentieth time. Then they petitioned for "The Little Rid Hin." Of this they never grow weary. It is charming to watch the absorption of each little face, the anxiety when "ould fox" gets the "rid hin" in his bag, the joyful exultation when she

— "tuk her schissors out
And schnipped a big hole in the bag
So she could look about."

The children read from their spring note-books this afternoon. Here are some of the entries:

"I saw a blue bird Wednesday. He had a brown breast and blue wings."

"I saw a bee in a crocus cup."

"I heard a bullfrog last night. He was a big fellow, I know." (On being questioned, the child said he knew he must be big, because he *hollered* so loud.)

"I found some new grass on the bank."

To-day was little Helen's birthday, so we celebrated. Helen chose the games and occupations. We had an exercise in paper-folding and cutting. The children at the end made windmills and fastened them to the ends of

their rulers. Then they took a run out-of-doors with them.

We spent some time in drawing the horse-chestnut twig. Each child had a specimen at his desk. The best drawings were carried to the master for inspection. The children also moulded in clay. The best specimens were put aside to keep. They were a turtle, a nest, some fruit, and a bottle.

We are learning "Hiawatha's Childhood," and to-day much time was spent in talking about the poem. The children described his home and his plays, and a general talk on Indian life ensued.

The children have been reading John Burroughs's "Bird Enemies." This afternoon each child told some fact he remembered from it. Very nearly the whole essay was reproduced. We also talked about "glaciers," and looked at a dozen or so photographs of Swiss mountain scenery.

The teacher read to the children from Arthur Gilman's "Early Explorers," and they were much interested in the strange ideas people of by-gone ages had of the world. This led to a general talk, in which each child told what he knew about Columbus, the Mound Builders, Ponce de Leon, etc.

We "spoke pieces" and recited Bryant's "Robert of Lincoln," and reviewed our Memory Gems. The afternoon was ended by a series of kindergarten games.

"Tell us a fairy story, please," begged the children. So the story was told, and as Amy had brought her little music-box it was introduced just at the time when the lost children in the wood hear the fairy music and see the little elves dancing in the magic ring.

The children are enjoying Frank Stockton's "Bee Man of Orn," and think it the funniest thing they ever heard. They can't get over the "Jollycumpop" in "Prince Haskak's March."

The lessons in mineralogy are over for the present, and botany takes their place. But the children enjoy looking over the specimens they have collected, naming them and telling their qualities.

We have the print of a fish on a clay slab which furnishes material for stories and conversations.

We are studying the different tree twigs, watching the buds swell and the blossoms open. The children write their observations, draw the specimens and will color them later.

It is one of the privileges of every teacher to prove how far we have advanced beyond Shakespeare's day in school matters by showing how false to life are his lines,—

"And then the schoolboy,
With his satchel and shining morning face,
Creeping like a snail unwillingly to school."

METHODS FOR THE SCHOOLROOM.

POLITENESS.

BY JULIA M. DEWEY, RUTLAND, VT.

"Politeness is to do and say,
The rudest thing in the kindest way."

TEACHER.—Will the class think of some polite ways of speaking to father at the table; to mother; to the teacher in school; to mates on the playground; to some one whom you have accidentally troubled; to one you must pass before. Think of any other cases in which you might specially want to speak politely.

This will develop a variety of good expressions; but, what is of much greater moment, it makes them do their own thinking and fix their own standards. Have each pupil keep a list of all those that the teacher thinks worth preserving.

Teacher.—What are some of the uses of being polite?

The pupils will give as good reasons and almost as many as the teacher can. Do not give leading questions, but let the children strike out boldly. Without your aid, if you will be patient, they will surprise you with their philosophy as well as their observation.

Teacher.—Of whom do you first think in being polite?

Here is a chance for the class to teach themselves a grand lesson in unselfishness. They will see that they think of others first, of their relation to others, of being kind to others, of others' pleasure, comfort, advantage.

Teach that the first element, and requisite of politeness is unselfishness.

GOOD MANNERS.

There are many things connected with politeness that have little to do with other people, and many of these things come under the head of "good manners."

Teacher.—Tell me some things that a purely unselfish boy (or girl) may do that would not be "good manners."

The chances are that the class, as a whole, will think of most of the ill-mannered things that they are liable to do or see done. If not, the teacher can add to the list. She should, however, wait several days before she tells them anything. Wait until the community has a chance to contribute through the children. In this way the whole neighborhood is interested.

Teacher.—What is the harm of being ill-mannered?

The children will readily speak of the disadvantages of being "odd," "queer," "coarse," "green," "countrified," etc. They will say many things with a relish which, if the teacher said by way of criticism, might make things warm for her locally.

Teacher.—What advantages are there in having "good manners"?

They will readily say that good-mannered people get

along better, find work more easily, sell more goods, are liked by a better class of people, etc.

Here are several things to be insisted upon by way of politeness and "good manners."

Children should always provide themselves with sponge or slate-cloth and use it faithfully.

Boys should take off their hats before entering a school-room, and should not put them on at dismissal until they reach the outside door. If a teacher stands by the door the hat should not be put on until the boy has passed the teacher.

Children should always enter the schoolroom quietly. They should never be noisy or boisterous in the school-room. If games are played in-doors at noon or recess, they should be quiet games.

Never step on the seats or desks any more than you would step on chairs and tables at the homes of your friends.

Never scratch, cut, or mark furniture.

Never mark the outside or inside of any school building or of any building on the grounds. Emphasize this as the height of ill manners.

Use with great care that which belongs to another. Emphasize this in regard to school property.

Never laugh at the mistake of another.

Do not stare at strangers.

If you have a seat-mate share with him everything that belongs to you in common.

Stand on both feet; stand erect.

Do not "fuss" with things. Keep your hands still, unless they are occupied in useful work.

Do not call people much older than yourself by the first name.

When a gentleman speaks to you, say, "Sir?"

If a woman speaks to you, say, "What, Miss A?" or, "Yes, Miss A." It is not regarded as "good manners" to say, "What, ma'am?"

Young people should not remain seated when people much older are standing. The same applies to using the easiest chair, sitting by the best window, in the warmest, or lightest place.

A SUGGESTION.

BY C. E. S.

ONE country teacher, who was successful in keeping children interested in their work, tried, among others, the following plan with good results. Instead of the customary reward cards only, she used pens, pencils, rubber erasers, and other school supplies as tokens of studiousness and good conduct. Many of her pupils were from poor families, and she found them eager to supply themselves with these necessary articles; whereas, before they had become so used to the everywhere present colored cards that they showed no great desire to obtain them. "Variety is the spice of life," even in as small affairs as school rewards.

THE OSWEGO KINDERGARTEN—PRIMARY.

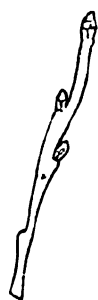
EDITORIAL OBSERVATIONS.

WE never made a better educational investment than in visiting the Oswego Normal School. The kindergarten work in the lower room differed little from the best work of the kind elsewhere, and calls for no special comment. In the upper kindergarten and the lower primary rooms, there were many departments worthy of note. The work was under the direction of Mrs. Clara A. Burr, soon to go to Brooklyn to take charge of the training of kindergarten teachers, and Miss Sara J. Walter, who has charge of the training work in its entirety. We purpose speaking in this article, of only a few of the many simple, useful, and ingenious methods.

The windows in February are filled with bottles, jars, or dishes of water, in which are placed branches of horse chestnut, willow, maple trees, for leaf, bud, and blossom, and apple, pear, and cherry trees and currant bushes, for buds, blossoms, and fruit.

OBSERVE, DESCRIBE, DRAW,

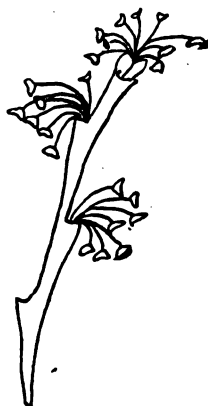
is the motto of the school, and the little folks study carefully these branches and their unfolding, and also the trees as they leaf, bud, and bloom in nature. They bring in the earliest branches that show signs of life. The children observe with great care. The teacher draws the



Elm, Feb. 21.



Elm, Feb. 29.



Elm, March 2.

branch upon the board and writes the date when first observed. This drawing and record are left through the season, so that the drawings and dates make a valuable record of the leafing, budding, and blooming of the neighboring trees and shrubs.

The teacher also draws these in a book kept for the purpose, and taken together with the dates, year after year, make a valuable book of reference.

The kindergarten pupils do not attempt to draw these, but the teacher pricks them, enlarged, on cardboard, and the child, with the specimen before him, selects his own silks and works the branch, nodes, buds, leaves, catkins, etc. This is the beginning of industrial art. The

child observes carefully, selects colors discriminately, threads and uses the needle skillfully, learns habits of order, neatness, cleanliness, etc. No description can give any idea of the educational value and serviceableness of this handiwork.

We scatter through this article *fac similes* of the drawings in the teacher's record book. They are simply reduced in size in order to economize our space. These are also utilized for reading lessons by means of charts. We take as a sample the *dandelion* chart. The earliest dandelion plant is brought to the class as soon as it is in bloom. The children have the real dandelion to study.

Horse-chestnut,
March 1. March 17.

March 28.

The teacher also draws it upon the board, and upon the chart. With many of the flowers she secures a highly colored sample from *Vick's Floral Guide*, or similar advertising work, and pastes this upon the chart. The teacher is in no haste to complete her chart, but writes in large, bold hand whatever they learn, and this is the reading lesson. The children also write the same upon their slates as a language lesson.

We give the lesson upon the dandelion chart entire. Remember that each observation was made by the children, was freely talked over by them before it was written, and was then read naturally and fluently.

- The dandelion has a long root.
- The dandelion has toothed leaves.
- The dandelion has a hollow stem.
- The dandelion has many flowers in one.
- The dandelion has many caps.
- The dandelion has many crowns.
- The dandelion has many stamens.

The dandelion has many pistils.
 One chart is devoted to the *apple blossom*.
 The blossom has a green cup.
 The blossom has a pink and white crown.
 The blossom has pink and white stamens.
 The blossom has a white pistil.

There is a *cherry blossom* chart, with a picture in bud, one in bloom, one in small fruit, one in ripe fruit (taken from *Vick's Floral Guide*), with reading lessons.



Poplar, Feb. 9.

There is a *poppy* chart, etc., etc.

One chart was devoted to the *frog*, and one to the *fly*. There was a picture of a fly, a picture of one of his legs enlarged, also of one of his wings enlarged.

There was one chart devoted to the reading lesson of the frog, one to the fly, and another to a combination of the frog and the fly. Remember that all these lessons are developed by the children from their own observations.

In the same way they study the growth of *corn*, and other seeds, soaking a sufficient number of kernels to be handled and studied by the children.

With the same thoroughness they study the birds. The first bird seen is reported to the teacher, and the child



Poplar, March 12.



Poplar, May 9.

seeing it tells all he can of its color, song, of where it was, of what it did. As soon as it is known what the bird is, the teacher draws a figure of it also upon the board, with the date of its first appearance. If it is a tree bird, it is drawn upon a branch; if it is a bird whose nest is in stables or under eaves, its nest is drawn, etc. The

woodpecker is drawn at his pecking; the *robin* is upon the ground.



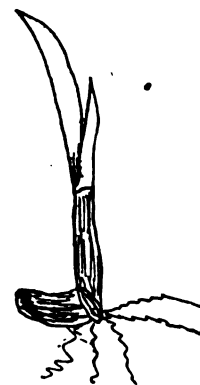
Corn, Feb. 4.



Corn, Feb. 27.



Corn, March 1.



Corn, March 4.

THE STUDY OF BIRDS.

CHILDREN love the study of birds, but they rarely know many birds intimately without some direction from parent or teacher. It is important in many ways that the children be early taught how, when, and where to study the birds of their own neighborhood. We have more than once found schools in which the children could tell more about the ostrich, eagle, and other birds they never saw than of any bird of their own country. Not so the training school of Oswego, where every child studies some of the birds each year, and every bird of the neighborhood during the school course. They are early taught to keep their eyes open to observe the color, shape, pose, flight, and nests of the birds; to train their ear to discriminate the songs of birds; to know when they come, what they do, when they go; to know the birds of the early morning, of the early day, of the evening, and of the night. They learn to draw and describe freely the birds and their nests. This is not as difficult as it may seem, even the pupils in the lower grades do it readily. Appended is a list of the birds of Oswego and vicinity, most of which are well known to the pupils from their own observation:

Fly-Catchers	Kingbird	Pine-Swallow
Phebe Bird	Ground Robin	Sand-piper
Bluebird	Night-Hawk	Meadow-Lark
Indigo Bird	Yellow-Hammer	Crow
Ground Bird	Robin	Bittern
Bobolink	Crow Blackbird	Duck
Yellow-bird	Cow Bunting	Crowsbill
Tanager	Striped Woodpecker	Blue Heron
Shrike	Starling	Owl
Blackbird	Groovebeak	Corn-Crake
Redwinged Blackbird	Swallow	Blue Jay
Woodpecker	Run-around	Grebe
Oriole	Martin	Snipe
Hawk	Chipping Sparrow	Partridge.
Catbird		

THE CIRCLE IN DRAWING.

BY D. R. AUGSBURG,
State Normal School, Kutztown, Pa.

THE true way of learning how to draw is to systematically train the hand to execute correctly, the eye to see correctly, and the brain to think correctly. This is the true way, and the one that will prove by far the most successful in the end. The ultimate end of drawing is to be able to represent intelligently what the eye sees, and to reproduce intelligently what the mind conceives. In order to arrive at this result it is well, as has been suggested before in these columns, to study drawing along three general lines: (1) Draw from the real object to gain the ability to reproduce what the eye sees. (2) Copy the drawings of good artists to gain the ability to reproduce what the eye sees in the best manner. (3) Study methods to gain the ability to reproduce what the eye sees, and the mind conceives, in the most simple and effective way.

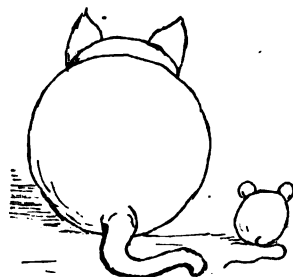


Fig. 1.

Under "Object Drawing," which appeared in the March number of this paper, and in the JOURNAL OF EDUCATION for March 22, is given a simple method to show how to begin



Fig. 2.

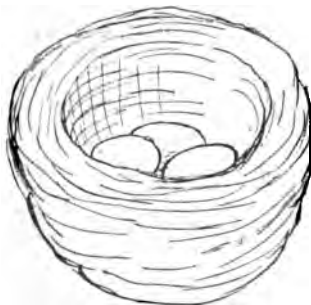


Fig. 3.

derstood because they depend on a form that is familiar, and easily made,—the circle.

Without doubt the most difficult part of drawing to the beginning student, and often to advanced ones, too, is to see an object as a whole,—as a unit, without being confused by the details, and led away by unimportant parts from that which is more essential. By this method the circle takes the

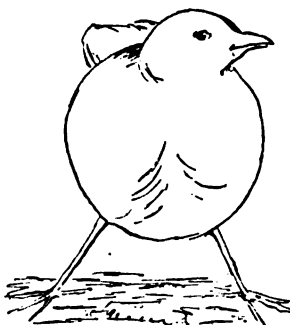


Fig. 4.

place of the general form, and thus relieves the student from keeping in mind the whole object, and allows him to give his undivided attention to the details. Of course the method is limited to those forms which are in whole or in part circular, or that may be made to take the form

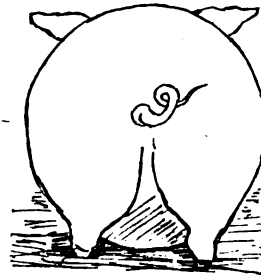


Fig. 5.



Fig. 6.

of the circle. But the merit does not lie so much in this as in the encouragement it gives to look for simple forms that are familiar, among strange and complicated objects, to look for the general shape and not be drawn away to the subordinate parts, and to see the whole as a unit rather than a collection of details without definite shape. The



Fig. 7.



method is also valuable for its suggestions in showing how complicated objects may be made simple, and in encouraging originality in the students.

The drawings in this article are so simple, and their scheme of construction so apparent, that little or no explanation is necessary. The basis of all the drawings is

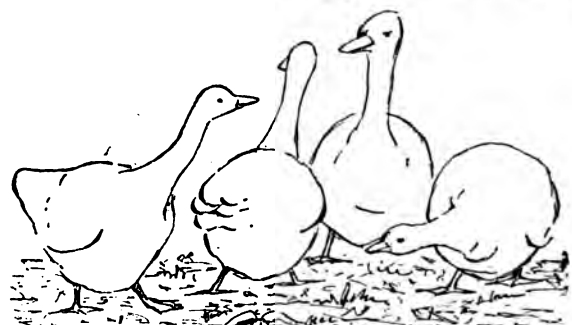


Fig. 8.

the circle. Begin each drawing by making a circle, and to this add the various parts as seen in the original. In Fig. 1 the body is a circle, and the head is a segment of a smaller circle. Fig. 2 is composed of two circles, on inside of the other, and Fig. 3 is similar to it.

This application of the circle is almost infinite in variety, and may be made of great importance as an aid in draw-

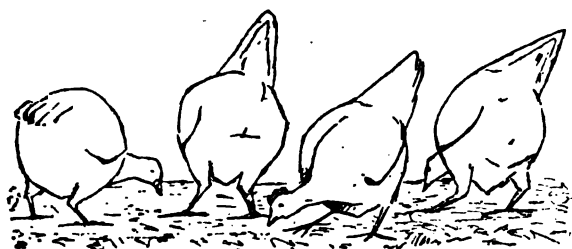


Fig. 9.

ing, and as a means of unifying that which would otherwise confuse the mind.

The square, the triangle, the ellipse, and other familiar figures may be utilized in the same way, and just as extensively.

Do not content yourself with simply copying these drawings, but rather let them be the means of leading you to search for similar forms in nature, and encourage you to grasp them in your mind as one unit, however complicated they may be.

HOME STUDY.

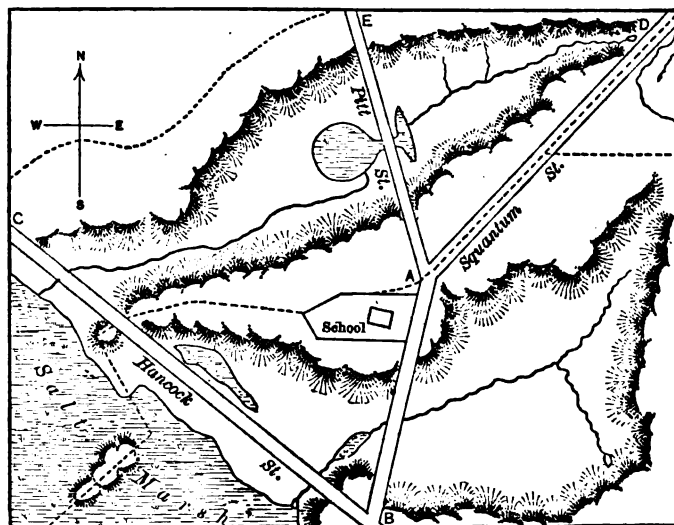
BY M. T. P.

THERE can be no more interesting and instructive study than that which is made of the town or city in which the school exists. The study is almost wholly neglected, unfortunately, giving place to detailed study of foreign countries and cities. The plea is doubtless that lack of time and an inflexible program prevent consideration of a topic which offers every inducement for extended interest and genuine pleasure and profit.

Children are always proud of their town, of its importance, its history, its name, and when the subject is opened to them for research there is practically no limit to their resources for securing information touching the vital and obvious conditions. Parents and grandparents will be enlisted in the scheme and will eagerly furnish their quota to the general fund, attics will be ransacked for old books, pamphlets, records, papers, which will aid in disclosing the story of the town, and the village library will be visited by ardent antiquarians, youthful but promising, in search for facts pertaining to the growth, development, and progress of the village in which they reside. Have a map of the town or county in the school. This map can be borrowed of some family and carefully preserved to be returned after it has served its purpose. Doubtless some one will present a map to the school. Encourage the scholars to draw maps of the town, indicating the principal street, hills, mountains adjoining, and bodies of water. In this connection a museum can be started, which shall contain specimens of the products of the town or county. Specimens of all the minerals, insects, and

flowers, may be arranged and labeled and placed on shelves or in a case.

We present a map, and a molding-board map of the Quincy School district, Quincy, Mass., as made by the pupils of that school when Alex. E. Frye was principal. Mr. Frye devotes ten pages of his *Geography with Sand-Modeling* to an account of the way in which the pupils paced, bounded, mapped, and molded the district. Such an exercise will be found to introduce the study of geography intelligently.



A few of the topics which the teacher may offer for consideration and report on, are given; others will suggest themselves as the study advances:

Name.	Town library.
First settlers.	Name of first street laid out.
Nationality.	Noted trees.
Reasons for settling.	Benefactors of the town.
Natural advantages.	Population after fifty years of growth.
Indians.	Present population.
Troubles with Indians.	Names of mountains, heights, etc.
Date of first settlement.	

Date of first permanent settlement.	Reasons for the various manufacturing interests in the town.
First families.	First postmaster.
Farmers, etc.	Present postmaster.
First church built.	First selectmen.
Other churches.	Present selectmen or mayor.
First schoolhouse built.	Area,—square miles, acres.
First teacher, and course of study.	Date of incorporation as town or city.
First manufacturing business set up.	Noted preachers of the town.
Other manufacturing business set up.	Noted lawyers of the town.
Stage lines.	Noted doctors of the town.
Turnpikes.	Record of great occurrences in the town, as fires, severe storms, etc.
First railroad built into the town.	
Town hall.	

TWENTY JACK-KNIVES.

BY LOUIS B. WILSON, DES MOINES, IA.

NINE girls and eleven boys, mostly German miners' children, in the fifth school year constitute the class. Early in the fall an attempt was made to have them do some carving, or "whittling," at home; but knives were scarce and always dull, and the work failed for lack of tools. The children could not go to the extra expense, and schoolboards usually are not expected to favor such plans. Still the need was felt of some hand-training aside from drawing and clay-modeling, and of the brain-quickening power of tools. So with the teacher's purse were bought

20 single-bladed, iron-handled jack-knives,	\$3.33
1 small whetstone, - - - - -	.50
20 rulers, - - - - -	.25
1 small saw, - - - - -	.50
10 sheets of sandpaper, 1 and 00, - - -	.15
20 toy pans for glue, - - - - -	.10
1 bottle of glue, - - - - -	.15
1 case of court-plaster, - - - - -	.10
	\$5.08

A piece of heavy cloth furnished the back, and half a yard of heavy elastic the strips for a knife-case like this: (See Fig. 1.)

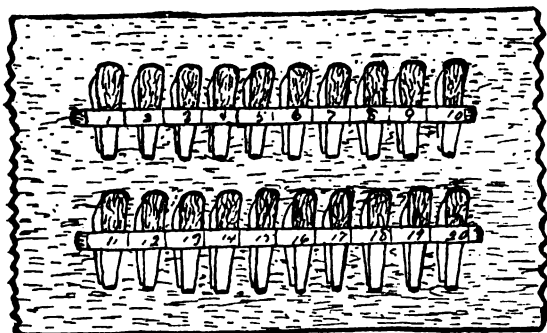


Fig. 1.

The dry-goods stores donated twenty cardboard boxes,

about 3 x 14 x 18 inches, and these, each labeled with a child's name and number, hold the other materials and also all cuttings. The covers are convenient trays for shavings.

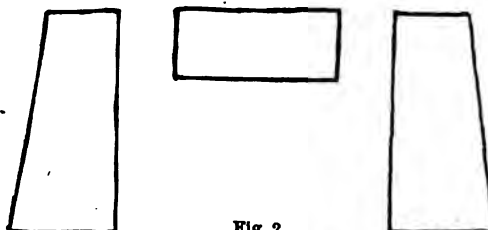


Fig. 2.

The parents gave their consent for the children to stay half an hour after school two evenings a week; and so, in a very humble way, certainly, but with willing hands and sharp knives we attacked the empty crayon boxes of the building with a determination to cut or split.

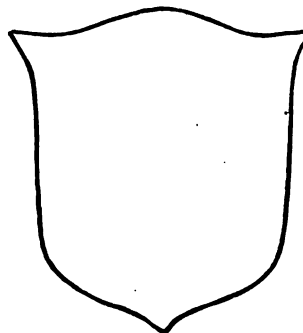


Fig. 3.

The first encounter was a bloody one, and the surgeon member of the class was kept busy with her scissors and court-plaster; but no tears were shed, and considerable bravery was manifested over the cuts of inexperience. Knives were held in every conceivable position under the sun. They were used to bore, scrape, gouge, chop, and saw until a little talking and showing proved that they were made for cutting. One girl was found polishing her wood with the smooth side of her sandpaper because she "didn't know both sides were not alike."

After one preliminary lesson we made our first attempt at cutting to a pattern. The first evening these were cut from the ends of crayon boxes, and then polished. (See Fig. 2.)

At the next lesson this: (See Fig. 3.)

And at the third, this, from the sides of the boxes: (See Fig. 4.)

At the fourth lesson these were fitted

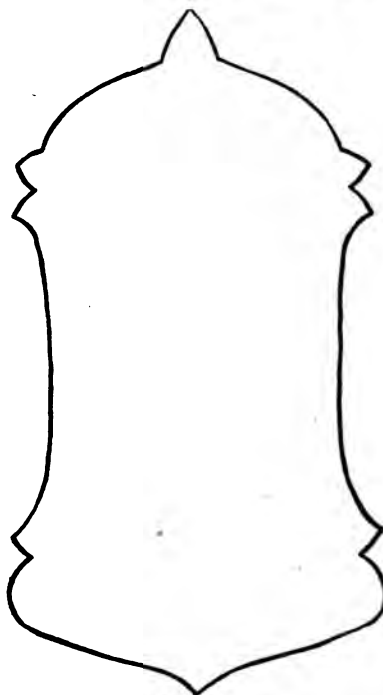


Fig. 4.

and glued together. Hung up by two tacks in the back

they make pretty and serviceable match-safes. (See Fig. 5.)

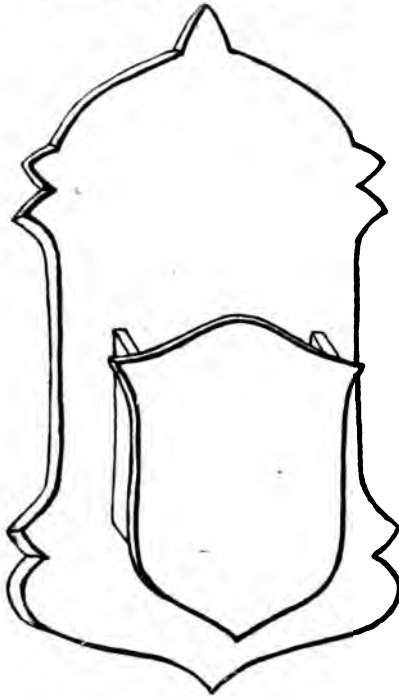


Fig. 5.

spread the glue with a toothpick on the edge of her last board, remarked, "Let's sell these to buy court-plaster."

We are still cutting. More anon.

In so short a time no generalization could be made, but here are some of the facts noted: Attendance on the day's lessons is given as perfect. Children are off their guard, and their common sense power is readily gauged. The best piece of work is by a boy, also the poorest piece; but the bulk of the good work is by girls.

Though nearly all old wounds were healed and few new ones made, yet one little black-eyed miss, as she deftly

IN THE HUMAN BODY.

NAME the part or parts of the body that answer to the following description:

1. Two lids.
2. Two caps.
3. Two musical instruments.
4. Two standards of measure.
5. Twenty things of which a carpenter uses thousands.
6. Two lofty tropical trees.
7. Two playful animals.
8. A great number of whips without handles.
9. Weapons of warfare.
10. A large number of weathercocks.
11. A traveler's companion.
12. Two fine buildings.
13. A king's pride.
14. Parts of a carpenter's tool.

A CAPITAL TEST OF ATTENTION.

READ to the class a page of something interesting, and test their power of attention by requesting them:

1. To count the words read, as you read, without any aid. Few if any will count correctly. Read with aver-

age rapidity. It is a severe test. Read more slowly, and then quicken after they have acquired power.

2. To make a short mark for every word and count the marks afterward. Even this is by no means easy. When they have acquired this skill, try them with making a mark for each word, crossing each four words to make it five, drawing a double line through the last of each five of five fives.

A BOSTON COMPOSITION.

WE give a fac-simile of a composition written by a Boston boy a few days since. The penmanship speaks well for the lad, but the thought, spelling, punctuation, and arrangement will encourage many a disheartened teacher in less favored communities.

A story about a sword fish
the sword fish is the strongest
fish in the sea it can lick
any fish in the sea it has
a sword eight feet long
its body is twenty feet long
it can lick the
whale
shark
porpus
turtle fish
haddock
mackerel
and salmon.

Charles A. H.

RAPID ADDING.

FOR rapidity and accuracy in adding, read a series of numbers below 10 very quickly, and have the pupils write the new sum each time, the teacher not answering any question. For example the teacher would say: Add 5, 6, 7, 3, 8, 9, 4, 6, 7, 9, 2, 7, 8. And they would merely write answers as indicated in the vertical column. They would never see the problem added. This combines mental and slate work admirably. Try it, and the result will surprise you.

11
18
21
29
32
42
48
55
64
66
73
81

USE, but do not abuse textbooks.

LESSONS ON COLOR can hardly come too early.

MUSIC DEPARTMENT.

STANDARDS OF CRITICISM IN SCHOOL MUSIC.

BY W. S. TILDEN.

IT will be a good day for school music when the standards by which to judge of sound progress are well understood and defined. We cannot depend on the standards proposed by the whims of any musical or semi-musical person in the community; a broad view, as well as special training and experience, is needed in order to form correct judgment. Without this, one minor detail or phase of instruction is emphasized to-day as all-important,—another to-morrow.

Then again, the pretty manipulation of a class in the singing lesson does not even prove that the lesson itself is worth teaching, however captivating the performance. The pupils are at an interesting age, and we regard them as a perennial wonder though we have heard them do the same thing a hundred times before. A teacher, too, becomes much interested in a mode of presentation and in himself as the author of it; if he has somewhat of the showman's temperament,—making a very little pass for a great deal,—the pleased listener, dazzled by the display, is apt to render a verdict of remarkable progress.

The father of American school music was wont to say that the "pupils are to be made more cheerful, happy, kind, and studious by the singing exercise; these are the results music was designed to secure." This beneficial influence may be secured to some extent by careful singing whether notation is taught or not. Note reading is not the greatest of the difficulties in the way of the masses of children learning to sing; a poor teacher can much better teach note reading than actual singing.

A right attitude on the part of the children toward the singing is first of all important; enjoyableness is a prime element of success. But it must be musical enjoyableness, and not merely a coarse overflow of animal spirits, called "enthusiasm" by those who would be just as well pleased with any sort of rhythmical uproariousness. A certain committee man had his own standard in regard to this feature of the singing. The teacher had been laboring for some time with a class of rough boys to induce them to use their voices in a somewhat more smooth and musical way; and one day, while engaged in this benign but difficult work, said official entered. After listening a few moments he exclaimed: "The children don't sing here as the boys at the Reform School do; there every single one sings just as loud as he can. Let out your voices! You know how people holler 'fire'! 'Now, boys,' said he, addressing them, 'all of you holler *fire*!' Straightway the fifty boys set up a yell which was enough to deafen ordinary ears, and set every sonorous thing in the room to ringing. "There," he remarked, "that is the way to let your voices out."

In schools where little time can be devoted to singing it is often necessary to secure as much as possible of the benefits to be derived from song without attending to notation, just as "a child may listen to, enjoy, and appreciate the reading of much literature that he cannot as yet read for himself." But in most cases it is possible to do more than this, either by the analysis of the songs sung or by attending to music in its written forms. Very frequently, however, we are made to feel that the power to sing some little thing from the notes takes precedence of everything else.

Where music, however, is a regular branch of study the pupils are expected to sing, to think about the things sung, to read notes, and to know various matters of musical theory. In such schools written examinations, though taking much time, are frequently useful. They show knowledge of theory, and something in the matter of notation, though not much in the way of facility in reading, and nothing as to singing ability. On the other hand, performance of music under the teacher's directorship shows singing power and much in regard to correct instruction or its reverse; but it tells us little about reading or theory except as we infer that the previous study of these may have aided the accuracy of the singing.

Tests in singing at sight are sometimes conducted in a partial or hobbyish way instead of with a well-rounded estimate of what should be accomplished in such a test. A class was once examined in this fashion: A tune in regular form, written for the occasion, was placed upon the board; the examiner took the stick, and pointed to a note here and a note there to see if the children could strike the right sounds, one by one, in a disconnected way. This was done, and the test was ended. Nothing was shown as to the melodic construction, ignoring the fact that in the reading of language, even, the difficulty is often not so much in the single words as in the combination to get the sense. Nothing was shown as to the various durations with accent which form the rhythmic construction, just as much a part of the tune as the rise and fall in pitch,—and nothing as to the grasp of the tune as a whole, or the application of words. It would puzzle a Harvard professor to pronounce his own name spelled backwards. What of it?

The importance of these suggestions will be seen if we reflect that the tests for ascertaining the degree of progress will be determined by our notions of what a sound course in school music should contain, and of the order in which its different parts should be presented. Furthermore, the teacher's conception of what forms a proper test of progress will color all his teaching; either consciously or unconsciously he shapes his efforts to meet the supposed requirements.

As is the standard of excellence so be the tests; as are the tests so will be the teaching.

MUSIC is as important a branch of study as can be taught in the school.

THE CRY OF POLAND.

Written for "The American Teacher" by N. LINCOLN.

f *Maestoso.*

1. God! scorch'd by bat-tle fires, we stand Be - fore Thee on Thy throne of snows. O Fa-ther!

But Fa - ther,

in this si - lent, si - lent land, We seek no ref-uge nor re - pose; We ask, and

1st time, *f*; 2nd time, *p*.

shall not ask in vain,— Give us, give us, give us, give us our her - it - a - gain.

2. Thy winds are ice-bound in the sea; Thine ea - gle cow'rs till storms are past; Oh, when those

Lord! when those -

moan-ing winds, those winds are free,— When ea - gles mount up - on the blast, up - on the blast,— Oh,

our i - cy,

breathe up - on Oh breathe up - on our chain, And float, And float our Po-land's flag a -

Oh, breathe up - on our i - cy,

ff gain, And float, And float our Po - land's flag . . . *ritard.* a - gain.

3 'Twas for Thy cause we once were strong,—
 Thou wilt not doom that cause to death;
 O God! our struggle has been long,—
 Thou wilt not quench our glimmering faith;
 Thou hear'st the murmurs of our pain,—
 Give us our heritage again.

THE AMERICAN TEACHER.

A. E. WINSHIP, } Editors.
W. E. SHELDON, }

All communications should be addressed to the Editors.

Subscribers whose orders are not promptly attended to are requested to repeat the order. Postals and letters should always state the P. O. address, town, county, and state of the subscriber to which THE AMERICAN TEACHER is addressed.

Subscribers should remit by P. O. orders or by registered letters. All business letters and telegraphic despatches should be addressed to A. E. WINSHIP, Publisher, 8 Somerset Street, Boston, Mass.

THE AMERICAN TEACHER is sent to subscribers until it is ordered stopped, and all arrearages are paid.

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THE AMERICAN TEACHER never appears in July nor in August. It will be at its best, with many improvements, in September.

KEEP good natured.

BE polite, and teach and inspire your pupils to be courteous.

MAKE the most of your opportunities to teach about plants these beautiful days.

BIRDS are an attractive and valuable study for children, but much care is needed in cautioning boys against cruelty.

THE personal adaptation of the teacher to the pupil needs the emphasis that Supt. Charles Jacobus has given it on our first page.

BE loyal to your principal, superintendent, and school committee,—if you can. It is right, and it is certainly politic, but it is a severe strain sometimes.

SEE to it that the bright sunlight of these June days is regulated so as not to injure the eyes of your scholars. Temper the light with curtains and blinds.

DON'T have the writing lesson directly after the recess or at the opening of the session. The muscles are tremb-

ling with the results of play and the writing must, perforce, be unsatisfactory.

THE question is usually put to a boy or girl, "How do you like your teacher?" That's the wrong way. It should be, "How does your teacher like you?" or, "What does your teacher think of you?"

LANGUAGE lessons are in greater danger of getting in the "ruts" than any others just now, hence the value of the article by "M. T. P." on the first page of our supplement this month, and similar "lessons" from the same pen in recent numbers.

THE teacher who succeeds in inspiring a universal schoolroom regard for the rights of others, who can lead the pupils to consider uniformly how not to annoy others, is doing more for himself, the school, and the individual pupil than by a life-time of scolding and punishing for disobedience.

FOR ten months in the year you have been doing what you had to do, for two months do as you want to do. Read, study, travel, rest, everything, as your inclination prompts, harnessing your judgment with your fancy. Genuine rest will come from a harmonious environment and a contented mind.

If you have an exhibition and graduation day for your first class, do not fail to give those that remain in the lower class a taste of the delights of being on exhibition. Arrange a public day, when the parents are invited to hear the recitations and inspect the school. Let the work be done entirely by those that are to remain in the school or who do not graduate. It will be a novelty, will please both parents and children, bring credit to yourself, and be a simple act of justice to those who have labored throughout the year as faithfully as those who graduate.

RADESTOCK says that more men are made not only bad but ignorant by education than by nature. This extreme position will shock many of our readers, and yet none know better than teachers how easy it is for errors in teaching and school management to misdirect a child's habits and tendencies so as to make him ignorant of many things he else might have learned. We do not think the cases numerous, but one is too many, and we fear many teachers have more than one case to answer for per year. The responsibility is great.

VON RAUMER makes a good study of the psychological distinction between those pupils who have a comparatively equal liking for all studies, and those who have a distinct predilection for certain subjects. Each class of mind has its place in the world, and the one may be as successful and serviceable as the other, but they are nowise alike. The former cannot take hold of anything as vigorously and as intensely as the other, though he may adapt himself to the necessities of life and activity more readily and skillfully.

ARE you finishing your school year with that "very worst boy" in your class, still in a degenerate state? Are you willing to assume the responsibility of your year's work with him? Have you done as you intended doing, and did you intend doing anything with him other than tolerating him? Are you willing to have this boy's next teacher judge of your humanizing influence by his deportment? As between yourself and your conscience, are you glad of what you have done and thoroughly satisfied with your work? Can you look on it as exemplified in him and say "it is good"?

THIS is the last month of this school year, and the last opportunity for many boys and girls to come under the influence of a school teacher. It is worth while for the true teacher to realize her position and possibilities at this time, and to be willing to take a little time from the cram of examination to sow some seeds in the minds of her pupils for manliness, womanliness, scorn of falsehood, love of truth, honor for parents, faithfulness to duty, respect for others' opinions, love of country, and fear of God. Be for a time *en famille* with your class, and send it forth instructed in some things beside those found in your iron-clad curriculum.

SPIRIT OF CRITICISM.

BE very careful of your spirit of criticism. It demoralizes any man or woman living. It sours, curdles, rumples, ruins the disposition of any person to find fault. It permanently injures no one but the fault-finder. As soon as a person is known as a chronic grumbler he cannot harm any one by his criticism, and his praise is not worth the having. The worst of it is that the growler comes to think he is smart. The serpent is never beautiful though the coloring elsewhere might be exquisite. Only the snake has an eye for the beauty of the snake, so the sarcasm and brilliancy to which envy and jealousy give rise, and the peculiar smartness upon which a soured, envious, or jealous writer or speaker prides himself are never witty or wise, though the same expression with a different spirit might make them so. Only the serpent species of humanity enjoys the poison of the reptile. Teachers, educational lecturers and writers, moulders of this plastic age of American life, may well leave all rhetorical beauties of the reptilian order to the politician and theologian.

PARENTAL LOYALTY.

WE must secure from the parents uniform loyalty to the school. This is usually easy, but the more difficult it is the more indispensable. Such is the constitution of American society, and such the intricacy of home, society, and school life that the permanency and efficiency of the school system depends largely upon parental loyalty.

Such is the peculiarity of school discipline that parental disloyalty to the teacher, the school, or the system, without specially aggravating cause, is almost treasonable, because of the insidious mischief that may be wrought. The teacher is too busy to do much by way of personal visitation to the homes, but when there are evidences of disloyalty in the community, there is no use to which out-of-school time can be put to better advantage than in knowing the parents favorably. If children hear disloyal sentiments expressed regarding the teacher or the school at home, there will be little comfort or success for the teacher.

OUR PRIZES.

THE May prize proved too easy, and we had in justice to all concerned to give nine prizes in place of five. It is also unsatisfactory to have the prize depend upon the promptness of reception. In the case of the June prize, therefore, we have chosen something quite different. One prize at least will go to a teacher, one to a pupil, one to a very young pupil. The date is set ahead so that there will be time enough for all to do their best. Remember that we must receive the answers by July 10.

The responses to the April prize were highly gratifying, and those for the May prize are coming in much more abundantly. We had thought it more difficult, but it proves to have been much easier. It is interesting to see how much more directly some will reach the goal than others. The most interesting report that has come to us is from the Institution for the Blind, South Boston, where the blind children made all the transformations of words. Annie Billings, Norwich, Conn.; A. E. Melendy, Sterling, Lillian Ecker, Washington, Pa.; class in Perkins Institution for the Blind, South Boston; Ira W. Houghton, Albany, N. Y., were the five to win the prizes. Four of them chose Barrows's *Acts and Anecdotes of Authors*, while the fifth chose Southwick's *Quizzism and Key*. Belle Slewey, Romeo, Wis.; Joe Lemont, Richmond, Me.; Florence James, Sharon, Pa.; Mary Johnston, Lost Nation, Iowa; Grace L. Peakes, Boston, are awarded special prizes, three choosing *Acts and Anecdotes* and the other *Quizzism and Key*.

We print the Index to the AMERICAN TEACHER for 1887-88, with title page, independently, so as not to take valuable space from the reading portion of THE TEACHER, and will send it gratuitously to all subscribers who will send their address on a postal card asking for it.

Do yourself and us good service this summer by acting as an agent. It will pay you well, and give us a larger audience.

FOR FRIDAY AFTERNOON.

FORTUNE TELLING.

BY MISS O. B. PERCIVAL.

(Requirements: Seven girls, a hassock or thick cushion, boxes filled with daisies, buttercups, and grasses; the boxes arranged to form a mound or border of the flowers)

Fortune Teller.—

Well, girls, vacation has come at last,
And our school work's a thing of the past.
What shall we do through our holiday?
Try to be useful, or spend it in play?

Other six girls.—

Oh, let us have fun,—nothing but fun!
Of work and lessons we'll have none.

First Girl.—

I'll lie in a hammock all day long,
And my voice shall mock the wild bird's song.

Second Girl.

I'll watch the clouds in the soft blue sky,
For I'll be an artist by and by.

Third Girl.—

And I shall read stories every day,—
That's more fun than to paint or play.

Fourth Girl.—

I shall care for my little brother,
For I must help my own dear mother.

Fifth Girl.—

And I'm going to help my mamma, too;
I'll try to be cheerful, and kind, and true.

Sixth Girl.—

We're growing so fast we ought to gain
Each day, one step toward our life's great aim.

Other Girls.—

Oh, yes, of course we mean to attain
When we've grown up, great fortune and fame,
But while we are little let's have fun,
Leaving all work for the days to come.

Fortune Teller.—

But will it be right to waste each day
In idle dreams and in useless play?
We mean to grace our womanhood
By lives unselfish, noble, and good.
Isn't it time we should all begin
Over our faults the victory to win?
Present life will the future foretell;
Our daily acts will our fortunes tell.

First Girl (enthusiastically).—

Oh, girls, let us each our fortune tell.
With daisy white and buttercup bell!

All (stepping up to the flowers and picking each kind, say in chorus).—

Daisies! Buttercups! Beautiful flowers!
You can tell fortunes. What shall be ours?

Second Girl (stepping apart from others).—

Who'll read the petals of gold and white
That bring the dim future to our sight?

(After an instant's hesitation, and looking at one another, all, except the Fortune Teller, say in chorus.)—

Nell! Nell shall be Gypsy Queen to-day.
Tell our fortunes; don't shake your head,
Nay.

(Then all stepping to the flowers, they begin winding a wreath, which may after a little be exchanged for a completed wreath hidden behind the flowers. During the making of the wreath they say slowly in chorus.)—

We'll crown our Queen, and our fingers fleet
Will weave a wreath of these flowers so sweet.
Igery, ogery, oger, ee,
Daisies, your eyes must help her to see;
Dear little Buttercups, you must tell
All that you know to our dear Queen Nell.

Third Girl.—

Each flower will whisper some mystic word
That only by Nellie's ear is heard.

Fourth Girl.—

Nell's eyes in each flower the life shall see
Of the one who waits on bended knee.

All.—

But let it be fun,—nothing but fun!
For of serious things we'll have none.

Fifth Girl (taking the wreath).—

Buttercups golden and daisies white
Could only tell of a future bright.

Sixth Girl (placing wreath on Queen's head).—

So, beautiful Queen, our future show;
Your humble subjects are bending low.

(This is said as they all form a semi-circle and bow low while the wreath is being placed on the Queen's head.)

All.—

Now we're ready, Fair Queen, to begin.
Daisies! Buttercups! merrily sing!

First Girl (kneeling on a hassock at the Queen's feet, and handing her flowers to the Fortune Teller).—

First to come, Fairy Queen, please to say
A famous singer I'll be some day.

(The Fortune Teller takes the flowers and rings them by her ear, listening as she repeats slowly the first two lines, and then holds a buttercup under the chin.)

Daisy, Buttercup, come to my aid.
Hubery, hiberny, hober, hade,
You love butter, but more you love ease;
You shall travel far over the seas.
Hubery, hiberny, hober, hue,
You'll have a husband both gallant and true.

Hubery, hiberny, hober, hitch,
With plenty of money you'll be rich.

Second Girl.—

That's just splendid! Now tell me mine,
As so humbly I bow at your shrine.

Fortune Teller.

Daisy, Buttercup, whisper it low,
So sweetly, softly, sadly, and slow.
Butter you love not, nor love the boy
Who finds in your smile his truest joy.
Darkly, dimly, dimly I see
An old-maid teacher you'll surely be.
But cheery, merry without annoy,
The life is full of sunshine and joy.

Third Girl.—

That is not bad, and I long to know
What my gold and white flowers can show.

Fortune Teller.—

Daisy, Buttercup, what do you say?
Hippity, hoppity, happy day!
You love butter, and how you love gold!
A husband you'll have both rich and old.
Dickery, dockery, oh dear me!
The boy you loved has gone to sea,
But hippity hop, oh happy day!
He's back, to find you a widow gay.

Fourth Girl.—

Oh, what nonsense! now when you tell mine,
Say in the home-circle I'm to shine.

Fortune Teller.—

Daisy, Buttercup, tell me true,
What shall this little maiden do?
Hubery, hiberny, hober, hite,
Loves not butter, but stories shall write,
Busily, brightly, my honey-bee,
Great fame and wealth and joy you shall see.
Hubery, hiberny, hober hite,
A lovely home and your heart's delight.

Fifth Girl.—

Here, dearest Queen, are the flowers I bring.
Pray what do their pretty petals sing?

Fortune Teller.—

Daisy, Buttercup, surely you'll tell
That for this dainty maiden all will be well.
Butter! Not much, nor money at all.
You list to the heathen's plaintive call.
"Come over! Help us!" they seem to say.
So you leave us and go far away.
Lonely! Oh, no; for angels come down
To help gather the stars for your crown.

Sixth Girl.

Now, last of all I come, dearest Queen.
Are there sheaves in life for me to glean?

Fortune Teller.—

Daisy, Buttercup, once more bestow
Your smiles on a maiden bending low.
Daisy! Buttercup! What's this you tell?
She loves butter, and money as well,
But she loves learning of all things best;
Loves poetry and history and all the rest.
She'll dream in Latin and snore in Greek!
Just fifty languages she shall speak!

All the others.

And now, dear Queen Nellie, you must know
What gifts the flowers on you bestow.
(Then ringing their flowers by their ears and looking upward, they say slowly:)
Igery, ogery, oger, um,
Four golden eras to you shall come:
The first, our love in your girlhood hours;
The second shall come with orange flowers.
Third, comes honor in life's golden prime;
Fourth, contentment in old age's decline.
That's well, Buttercups. Daisies, speak loud.
Happy at home or shine in a crowd.
Igery, ogery, oger um,
Loving and loved in all days to come;
Proclaimed by the flowers, both white and gold,
"Queen of Hearts," now, and when she is old.

(Then stepping to the front of the stage, the Fortune Teller recites this from an old Reader.)

When I am old (and, oh! how soon
Will life's sweet morning yield to noon,
And noon's broad, fervid, earnest light
Be shaded in the solemn night,
Till, like a story well-nigh told,
Will seem my life when I am old!)—
When I am old my friends will be
Old and infirm and bowed like me;
Or else (their bodies 'neath the sod,
Their spirits dwelling safe with God)
The old church-bell will long have tolled
Above the rest—when I am old.
When I am old I'd rather bend
Thus sadly o'er each buried friend
Than see them lose the earnest truth
That marks the friendship of our youth.
'Twill be so sad to have them cold
Or strange to me, when I am old!
When I am old?—Perhaps ere then
I shall be missed from haunts of men;
Perhaps my dwelling will be found
Beneath some green and quiet mound;
My name by stranger hands enrolled
Among the dead,—ere I am old.

*Ere I am old? That time is now;
For youth sits lightly on my brow;
My limbs are firm, and strong, and free;
Life has a thousand charms for me—
Charms that will long their influence hold
Within my heart,—ere I am old.
Ere I am old, oh! let me give
My life to learning how to live:
Then shall I meet, with willing heart,
An early summons to depart,
Or find my lengthened days consoled
By God's sweet peace,—when I am old.*

GEOGRAPHICAL EXERCISE.

ARRANGED BY J. E. GORMLEY.

IN the following exercise there will be found several lines taken from a nursery book, but most of the rhymes are original, and were made for the sake of geographical associations. If it is recited by four boys and one girl, according to the following arrangement, it will make a pleasant and profitable exercise for Friday afternoon.

First Boy.—I wish I only had a pair
Of snow-shoes, such as Indians wear;
The storms might beat, the winds might blow,
Across the snowdrifts I would go
And see the Arctic's splendid sights,
The green and red and yellow lights
That up the sky at midnight stream,
The icebergs on the seas that gleam,
And the big ships that, northward bound,
Are sailing for the whaling ground.
And, peeping from his hut of snow
I'd see the sturdy Esquimaux;
I'd help him track to their frozen lair
The walrus and the polar bear.
I'd see the great seals sport in glee
Along the shores of the polar sea,
And, hard by Greenland's ice-bound shore,
I'd hear the great waves dash and roar;
Then I'd come back from this frozen land
And tell you about the sights so grand.

Second Boy.—And if I had but wings to fly,
I'd southward skim along the sky,
And see the land where roses blow
When our fields are white with snow.
Beautiful birds of every hue
Where'er I turned, would come to view;
Groves, I'd see where the parrot calls,
And oranges hang like golden balls,
And tropical fruits are thick on the bough;
Indeed, I wish I'd some of them now.
There little brown monkeys, full of play,
Laugh and chatter the livelong day
In wilds where the stately palm-trees grow,
And gentle breezes softly blow
O'er balmy oceans with coral isles
That stretch away for hundreds of miles,
And beautiful reefs as white as snow,
Built by the insects so long ago;
Then I'd come back from this lovely land
And tell you about the sights so grand.

Third Boy.—And if I only had a boat
I'd spread my sails and eastward float;
I'd cross the broad Atlantic o'er
And visit Europe's well-known shore;

I'd sail away where the desert sands
Are crossed by camels and caravans;
I'd see the Arab on his steed
Flying along at lightning speed;
The ostrich of the torrid land
Digging his nest in the burning sand.
I'd pass shining towers and queer old towns,
And men with turbans on and gowns,
And pillars and temples crumbled low,
Built by the ancients so long ago.
I'd see beautiful castles, tall and grand,
Where dwell the nobles of the land,
And kings and queens, fine to behold,
Dressed in beautiful cloth of gold;
Then I'd sail back from this eastern land
And tell you about the sights so grand.

Fourth Boy.—And if I only had a horse
I'd westward, westward take my course;
With flying feet and floating mane
He'd gallop with me o'er the plain;
As lightly as the wind we'd pass
Across the waving prairie grass,
And strange, tall blossoms, blue and red,
Would wave above my horse's head.
I'd see the wild beasts on the plain,
And, holding fast by my horse's rein,
With lasso fixed, away I'd go
To hunt the fleeting buffalo.
I'd see the Indian on his horse
Skimming along his western course;
And, rising against the distant sky,
I'd see great mountains, jagged and high
Where gold and silver and iron are found
Hidden deep in the rocky ground.
I'd dig these mines with my own hand,
And bring you gold from this wondrous land.

Girl's Part.—Oh, what foolish boys you are
To wish that you had wings,
And horses, ships, and Indian shoes,
And all such foolish things!

You want to go and see the world,
And far from home to stray;
I know we all shall miss you much
When you are gone away.

I hope some day you'll have your wish,
And travel far and wide;
Be carried away by stately ships
That sail the ocean tide.

I hope you'll find the other things
To carry you o'er the land;
To north, and south, and east, and west
To see the sights so grand.

But I'm content to stay just here,
I do not care to roam;
I am dear mother's little girl,
I'll stay with her at home.

Pit, pat, patter, clatter,
Sudden sun, and clatter, patter
First the blue, then the shower;
Bursting bud and smiling flower.

NOTES AND QUERIES.

Questions and answers for the Notes and Queries should reach us by the first of each month. We respectfully request all the readers of THE TEACHER to take part in the discussions of this department. Send in questions, and furnish answers to questions given.—Eds.

ANSWERS TO QUERIES.

412. Given $x^2 + y = 7$, and $x + y^2 = 11$. Solve the equations.

Answer to this query will be found in the Notes and Queries Department of the JOURNAL OF EDUCATION of May 17.

413. What were the so-called Blue Laws of Connecticut?

The name, "Blue Laws," were given to the old regulations of the early government of a colony in Connecticut where the people were closely watched and often severely punished for all violation of good manners and morals. These laws, being so oppressive and written on blue paper, is considered the reason by some.

Another correspondent states the answer as follows: The early laws were so called for two reasons: (1) They were printed on blue paper; (2) they were oppressive in some cases, and thus considered "blue."

415. Should young children be taught to print letters before they commence writing script. Explain the advantages gained by so doing.

Children should be taught to write script from the first. There are positive disadvantages in requiring print to be used.

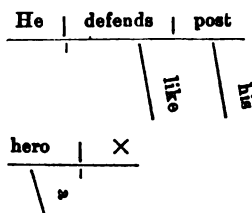
416. Professor Askenasy says the moon always presents the same side to the earth. Will some reader of the TEACHER explain how two bodies can always present the same surface to each other when one revolves more than twenty-seven times while the other revolves once? Also, what is the reason we have not one full moon for each of the moon's revolutions?

As this question is put, Professor A. does not say that the earth and moon present the same surface to each other, but that the moon always presents the same side to the earth. This is true; but an observer on this side of the moon would see all sides of the earth. The motion of the earth in its orbit lengthens the time between successive full moons.

417. Who was Powhatan's successor or brother?

Opeacanoough was his brother and successor.

420. How would you parse or diagram like in the sentence, "He defends his post like a hero?"



"Like," in the sentence, "He defends his post like a hero," is an adverb and modifies defends. Note,—Like both in its adjective and adverbial use, is used when two objects are compared. Like is an adverb when the comparison is made through an action done by the first; if not so made it is an adjective; as, "He drives like Jehu (adverb). A man like few others (adjective).

A. H. H., Florence, S. C.

Credit to F. C., Howellville, Pa.

421. Find the rate at which the interest on \$35.50 for 4 yrs., 5 mos., 26 dys., is \$7.373.

Solution.—The interest of \$35.50 for 4 yrs., 5 mos., 26 dys., at % is \$1.593 $\frac{1}{2}$, $\$7.373 \div \$1.593\frac{1}{2} = 4\frac{5}{11}\%$; hence the rate is $4\frac{5}{11}\%$.

J. M. K., Blair, Neb.

Explanation.—The principal $\$35\frac{1}{2} \times \text{rate} \times \text{time in years, } 4\frac{5}{11} = \7.373 interest. Therefore the interest divided by the product of principal and time would give for a quotient the rate.

423. Should we say anybody else's, or anybody's else? Why?

According to Reed & Kellogg the possessive sign should be placed immediately before the name of the thing possessed; the expression would be, then, "anybody else's."

A. D. B., Bottonville, Wis.

Credit to F. C., Howellville, Pa.

Another answer.—We should say everybody else's, not everybody's else. The possessive sign is placed before the name of the object possessed. There are some exceptions to this rule, but when the noun in the possessive case is modified by an adjective which follows it, or by a phrase, the rule holds good and the adjective stands between the noun in the possessive case and the possessive sign.

A. H. H., Florence, S. C.

426. Four years ago, a son's age was equal to $\frac{3}{4}$ of his father's; three years hence it will be $\frac{1}{2}$ of his father's. Required the age of each.

By the first condition of the problem, four years ago, $\frac{3}{4}$ of the son's age equaled the father's age; hence $\frac{1}{4}$ of the son's age equaled the difference of their ages four years ago; and the son's age equaled $\frac{4}{3}$ of the difference four years ago. By the second condition of the problem, three years hence, $\frac{1}{2}$ of the son's age equals the father's age; hence $\frac{1}{2}$ of the son's age equals the difference of their ages three years hence, and the son's age equals $\frac{2}{1}$ of the difference three years hence. Therefore, $\frac{1}{4}$ of the difference of their ages four years ago equals $\frac{1}{2}$ of their ages three years hence, and $\frac{1}{4}$ of the difference equals seven years; hence, the difference is 28 years. But the son's age equals $\frac{4}{3}$ of the difference four years ago. Hence the son's age is 24 years and the father's is 60 years.

A. H. H., Florence, S. C.

Credit to H. G., Allegheny City, Pa.; G. W. Gould, Charle-mont, Mass.; "E." Worcester, Mass.; A. B. F.; S. R., Wash-ington, D. C.

427. Give a solution of the following problem by arithmetic: The head of a fish was 9 inches long; its tail was as long as its head and half of its body; and its body was as long as its head and tail together. How long was the fish?

Head of fish = 9 in.; tail = 9 in. and half the body; body = head and tail = 18 in. and half the body. Then 18 in. must be half the body; the whole body is 36 in. long; the tail 9 in. and half the body, or 27 in. Then the fish is as long as the head, body, and tail together, or 72 in. long. FRED. B., Machiasport, Me.

Credit to C. K., Cosesville, Wis.; C. S. S., West Lebanon, Me.; J. M. K., Blair, Neb.; A. A. L. L., Kenton, N. J.; F. C., How-ellville, Pa.; S. R., Washington, D. C.; G. A., Brooklyn, N.Y.; L. H. Farmingdale, N. Y.; M. H., Longmont, Colo.; M. S. C., Euoinital, Cal.; A. B. F.; A. M. O., Glosco, Kas.

QUERIES.

443. Why do we invert the terms of the divisor in division of fractions? Give a condensed explanation.

444. Why do we point off as we do in multiplication and division of decimals?

445. Please give authors of one or all of the following quotations:

- (1) "In the great mystery which around us lies
The wisest is a fool, the fool heaven-helped wise."
- (2) "There's something in the world amiss
Shall be unriddled by and by."
- (3) "The eternal mind
Who veils his glory in the elements."
- (4) "What hopes the never-ending flight of future days may bring."
- (5) "Favored in their lot are they
Who are not left to learn below,
That length of days is length of woe,
Nor hath thy knowledge of adversity
Robbed thee of any faith in happiness."

446. A buys a watch for \$20, and a chain for \$1, and sells the watch and chain to B for \$23. B pays \$8 down. Then A buys another watch for \$5. Then B says to A that he will give him his watch and \$1 and keep the chain for his (A's) watch if he will call it even. Does A lose or gain, and how much?

447. The chimney of a fireplace is 2 feet wide, and the fireplace is 4 feet high. What is the length of the longest stick that can be pushed up the chimney, the thickness of the stick not to be considered?

448. In Steele's *Fourteen Weeks in Philosophy* (page 236 in edition of 1871) is the following statement: "If ice, at 32° be melted, 142° of heat will disappear, and the water will be at only 32°. How is the 142° obtained? Why not some other number as well as 142°?"

449. Give a solution of the following problem by arithmetic, if possible; if not, by algebra: A tree 80 feet high was broken into two parts, the top striking the ground 10 feet from the base. At what height was the tree broken in two?

450. What is meant by cutaneous absorption? Explain.

451. What is a county tax for?

452. When is paper money an unsafe measure of value?

453. On what does the true wealth of a nation depend?

454. Solve $2\sqrt{x^2 - y^2} + xy = 1$.

$$\frac{x}{y} - \frac{y}{x} = a.$$

THE APRIL PRIZE.

WERE published in the May number the names of fifteen to whom prizes were sent. We add the names of sixty-four others who deserve honorable mention because of their early reply and creditable work:

Lester Mead, Sophia M. Muenster, Wisconsin; George Davis Birin, Kentucky; Ina Early, Croxton, Nlon, Hattie Follett, Massachusetts; Louise Lukins, James Arkle, Kentucky; Ethel Ray Griffin, Elva Dunham, Emma Otis, Iowa; Minnie Davis, Mary Traine, Rena Tollee, Etta Jossi, Estes Thomas, Marie Knowles, Lillie Hoy, Daisy Davis, Bruce Ridenour, Lu Holloway, Henry Radford, Annie Ewing, Lena Barton, Judson McGinnis, Charles Fullenwider, Marie Mooney, Preston Jones, Maud Dobbin, Eddie Morrison, Nora E. Recob, Anna Cook, Dora Richardson, Mollie McGinnis, Judson Potts, Rena Mickle, Kansas; Pupils of Mary H. Atkinson, Pennsylvania; Elisha Brittingham, Maryland; Miss Bertie Willard, Mary Matzke, Wisconsin; Mamie Glensdorf, Iowa; Rosa Keller, Minnesota; John E. Smith, Jr., North Carolina; Mabel Sparling, Bennie Judson, Homer Tolley, Roy Armentrout, Illinois; Eva Sears, Michigan; J. J. Adams, California; Tonia Kuenne, Wisconsin; Francis E. Hemmenway, Massachusetts; Edward Skelley, Susie Roberts, Maine; Emma Johnson, Gertie Vanatta, Iowa; Edith D. Crooks, Ohio; Mamie Crippen; Vinnie Stark, Cora Robertson, Annie Scott, Bessie Williams, Aggie Breen, California; Bessie Flinn, Norwalk, Ohio; Grace L. Peakes, Boston, Mass.; Class in Perkins Blind Asylum, So. Boston, Mass.

THE MAY PRIZE.

UPON the editorial pages we announce the successful competitors. We here give a number of others who sent us early and creditable answers:

Annie Gilbert, New London, Conn.; Alberta Maynard, New London, Conn.; Annie M. Petric, Norwich, Conn.; Nellie K. Brewer, Norwich, Conn.; Jennie D. Fellows, Norwich, Conn.; Robert C. Kummer, Medford, Mass.; Arthur F. Brewer, Southboro, Mass.; J. H. Foster, Jr., Medford, Mass.; Carrie L. Goodale, Medford, Mass.; Minnie J. Strong, Medfield, Mass.; Daisy F. Ryder, Norwalk, Conn.; Fannie M. Gibson, Norwich, Conn.; Sadie E. Lounsbury, Norwalk, Conn.; Kate C. Shaw, Fall River, Mass.; Robert E. Carey, Cheshire, Conn.; Rebecca Meyers, Bethel, Conn.; Shelton Bissell, Norwalk, Conn.; Freeman A. Tower, W. Boylston, Mass.; George W. Savage, Augusta, Me.; Florence James, Sharon, Pa.; Flora Wolf, Allegheny, Pa.; Martha Welles, Allegheny, Pa.; Fred Bowery, Allegheny, Pa.; Ella Shapley, Smyrna, Del.; Lizzie J. Small, Allegheny, Pa.; Laura Palmer, Allegheny, Pa.; Rochester Drake, Delaware, O.; Eva C. Yates, Round Pond, Me.; Irene V. Stronge, Boston, Mass.; Alice M. Focht, Lebanon, Pa.; Class, Smyrna, Del.; Lizzie H. Matthewson, Abilene, N. Y.; Susie Slemmons, Allegheny, Pa.; Calvin Kiessling, Boston, Mass.; Annie McLellan, Saccarappa, Me.; Estelle Pegan, De Graff, O.; H. P. Howard, Glen Mills, Pa.; Jennie H. Tuttle, Littleton, N. H.; Alice M. Getchell, Boston, Mass.; S. J. Sheldon, Keene, N. H.

Agnes Hinman, Boston, Mass.; Clara Berg, Columbia, So. Ca.; Elva M. Dunham, Manchester, Ia.; Verna M. B. Darby, Waterloo, Ind.; Nellie Carnahan, Columbus, O.; George Barnhart, Columbus, O.; Bessie Flinn, Norwalk, O.; Arthur Morey, Merrimac, Wis.; Edith A. Brodbeck, Boston, Mass.; C. E. Lewis, Guthrie, Ia.; Mary E. Rea, Morning View, O.; Bessie B. Tate, Lowell, Mich.; Edith Flint, Brandon, Vt.; Libbie Cooper, Ocean Beach, N. J.; Clara L. Pickard, Fultonville, N. Y.; Lucy W. Eaton, Boston, Mass.; C. M. Gleason, Merrimac, Wis.; J. Claude Jones, Ocean Beach, N. J.; Florence H. Jackson, Boston, Mass.; Perla Coles, Boston, Mass.; Mabel T. Van Vanken, Fultonville, N. Y.; Mary J. Carr, Ocean Beach, N. J.; Robert Borton, Ocean Beach, N. J.; J. Newton Taylor, Fredericksburg, Va.; Leona Hope, Meadville, Pa.; Herbert L. Butler, So. Berwick, Me.; Mary G. King, Lake View, Ill.; Tonia Kunner, Sheboygan, Wis.; Maude Bullock, Leon, Ia.; Eugene Ktendaugh, Dunning, Ill.; Annie Orr, Cedarville, O.; Eva Edwards, Marshallville, Ga.; May Williams, Gill, Mass.; Nancy Myers, Rome Center, Mich.; Coral Walter, Manchester, Ia.; Cora Armstrong, Erie, Pa.; Harry Heath, Manchester, Ia.; Dora Keller, John West, Frank Kiesow, Alice Sacks, Grand Island, Neb.

OUR JUNE PRIZE.

THERE is a valuable word game employed in many homes that is as useful in the school as in the home. It is the best of busy work for grammar schools; it teaches spelling in an interesting manner; it stimulates healthful rivalry. It consists of taking a word and seeing how many words can be made from it. For illustration, from the word *Somerville* may be made the words *some, sore, mere, vile, rile, live, ore, ere, ill, isle, ell, move, more, love, lever, line, mile, etc.*

The words we propose are:

<i>California,</i>	<i>Educational,</i>
<i>Massachusetts,</i>	<i>Incompatibility.</i>

Write all the words you can make out of each. Each word must be found in either *Webster's* or *Worcester's Unabridged*. Give your post-office address, and state whether a pupil or a teacher. Pupils will state age. Teachers, please refrain. The answer must be sent to the editor, so that he shall receive it before July 10. The prizes will be as follows:

1. For the largest number of words made by teacher or pupil from the four words, we will give
2. For the largest number made by any pupil whose teacher is a subscriber to either the *AMERICAN TEACHER* or *JOURNAL OF EDUCATION* we will give *
3. For the largest number made by any teacher who is a subscriber to either the *TEACHER* or the *JOURNAL* we will give
4. For the answer showing the best system of working out the words we will give
5. For largest list of words not drawing either of the above prizes we will give
6. To the youngest pupil sending a good list we will give

1. The following set of books: Barrows's *Acts and Anecdotes of Authors*; Butterworth's *Songs of History*; Winship's *Methods and Principles of Bible Study*; Orcutt's *School Keeping*; Southwick's *Quizzism and Key*: Price of set, \$5.50.†

2. Any two of the books offered as the first prize.
3. Any one of the books offered as the first prize.
4. Any three of the books offered as the first prize.
5. Any one of the books offered as the first prize.
6. Any one of the books offered as the first prize.

* If the one winning this prize won the first, this will be given to the one having the second largest number.

† In place of any of these may be substituted any of the following: Oliphant's *Quaker Questions and Ready Replies*; Smiles's *Self-Help*; Payne's *Lectures on Education*; Herbert Spencer on *Education*; Lubbock's *Pleasures of Life*.

TEACH the pupils to have sharp pencils.

ENCOURAGE great freedom in talking about the pet animals and birds of their home and neighborhood. Especially encourage them to note carefully the habits, movements, and song of birds.

THE KINDERGARTEN.

A CHILD'S LAUGH.

ALL the bells of heaven may ring,
 All the birds of heaven may sing,
 All the wells on earth may spring,
 All the winds on earth may bring
 All sweet sounds together.
 Sweeter far than all things heard,
 Hand of harper, tone of bird,
 Sound of woods at sundown stirred,
 Welling waters' winsome word,
 Wind in warm, wan weather.

One thing yet there is, that none
 Hearing ere its chime be done,
 Knows not well the sweetest one
 Heard of man beneath the sun,
 Hoped in heaven hereafter;
 Soft and strong and loud and light,
 Very sound of very light,
 Heard from morning's rosiest height,
 When the soul of all delight
 Fills a child's clear laughter.

STICK LAYING.—(III.)

BY MISS LUCY WHEELLOCK, BOSTON.

[From Froebel's Kindergartenwesen.]

THE child in the true kindergarten gains through the early finger, ball, movement, and building plays repeated impressions of the angle, which are rendered more definite by the use of the sticks. So every play, while a whole in itself yet as a part of the great whole, has all the essential characteristics of the whole as well as of each separate play. Thus two things result from the free, creative activity of the children. First, in everything the child discovers qualities the recognition of which causes him pleasure. Second, the child handles everything as material with which to represent something which he feels within himself.

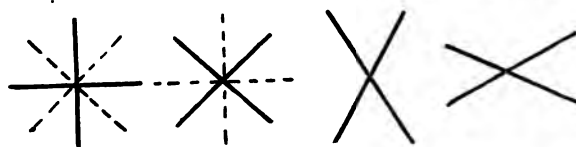
Everything to the mind of the conscious educator bears a double relation to the child; it arouses his interest, and at the same time furnishes occasion for self-expression. In this objective and subjective relation of the plays and occupations of the kindergarten lies their great charm for the children. This is the reason why perfectly finished playthings are far less dear to the child than simple, less elaborate ones, and why the former are so readily laid aside for those offered in the kindergarten.

The view of the mutual relation of the developing child and the play-material must not discourage mothers and teachers from using the objects furnished for the child's play. Follow your own instincts and the leading of the child, remembering that the child's dearest playfellow is the person who can become perfectly a child with him. Study your own activity, its exciting cause, and its effect, and so you will be led not only to a deeper insight into

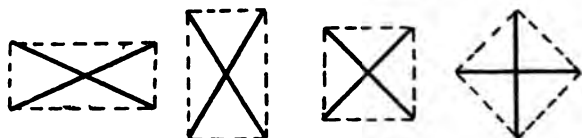
the being of the child, but into your own and all life. This is the blessing and reward of true child-culture.

And you, my dear reader, who have followed me so far in my explanations, and have seen the representations of the children which show a wonderful inner relationship, I must beg you to accompany me farther to trace the reason of this connection.

So will the childish mind be revealed to us, and we shall enter the secret workshop of its activity. Let us see what lies before us. Here a turnstyle, made with a vertical and horizontal stick; and here one of slanting lines. Near by we have sticks crossing at acute angles; and here the same in another position. Is this chance?

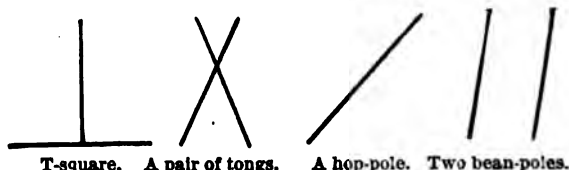


The oblique lines of the second turnstyle lie indicated in the first, and *vice versa*. What is visible in one is contained invisibly in the other, yet perceptible to the inner eye. Joining the ends of the sticks in each of the two forms, by four invisible straight lines, we have two squares, one lying cornerwise. And so in the other figures we see shadowed two oblongs. You see here the connection of

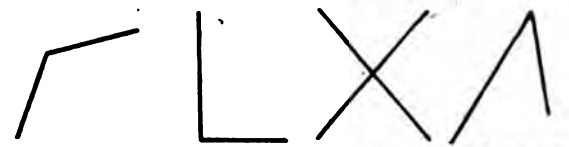


the visible and the invisible, the connection of opposites which is so attractive in kindergarten occupations; and it is attention to this which makes the real spirit of the system.

Kindergärtnerin.—"Now you see what pretty things the children have laid while you have been talking. Can you name them, children?" "Oh, yes, yes!"



T-square. A pair of tongs. A hop-pole. Two bean-poles.



A whip. A carpenter's square. An hour-glass. A fish-rod & line.



A summer-house. A tent. A cross. A sign-board.

K.—“How many figures have you, Emil?” “Eight.”

K.—“Well, this one?” “A pair of scales.”

K.—“Altogether!” *All.*—“A pair of scales.”

So the name of each object is repeated by all the children.

“Now let us count all our forms. Look at them carefully, then I will take up the sticks and see how many you can remember. I will give you two sticks as often as you need them.”

First one child and then another says: “Two sticks, please.” “Two more for me, please.”

You see here in this insignificant play the effect of the training of the senses, leading to accuracy of observation and skill in manipulation.

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THE essential nature of childhood is universal. The child that is born in the peasant's home, or in the palace, is the same helpless human being, depending immediately upon the care bestowed upon it for its existence. There cannot be any phenomenal way for the princely baby to develop, but there can be cruel limitations to the development of the peasant's child. To use the familiar distinctions of rich and poor brings the thought closer to us. In the hard struggle that the poorer working classes go through to obtain the necessities of

life for their children there is little time for attention to higher needs; and if there were time, there would be but little if any knowledge that such needs existed. If there were any realization of the needs there would not be the requisite intelligence to meet them; and lest the use of the term “higher needs” should seem to savor of chimerical ideas touching the development of the children of the poor, comparison may make the meaning clearer.

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The promotion of self-activity certainly has a far-reaching beneficence under these limited conditions. Look, for instance, at the importance of the training of the fingers of the children of the poor; their future will depend upon manual labor in some form; if that labor can be directed by some degree of intellectual power, in just so much will the working man or woman be lifted up and humanized. Let us take up, particularly, the subject of the working girl and woman, as they fulfill to us their duties of maids, nurses, seamstresses. Testimony on every hand will prove that there are few instances of skilled labor to be found among them. Their own houses and needs are by no means the schools where they can be taught what is requisite for the ordering of refined homes and nurseries. The task of instruction to all this adult incompetency has its

peculiar discouragement. These fingers that come to help us are not moved by brain power, apparently. In the matter of sewing, too frequently we find only a well-defined conception of filling out a day with work, only to fill out another by undoing what has been already done. I have been greatly interested in watching the use of the fingers of the children that I have at different times taught to sew in Saturday industrial schools connected with churches. In my own inexperience at first I wondered at the awkward and uncouth movements. I soon discovered that in the efforts of each child I possessed an index to its nature. When I could succeed in bringing the child to exercise thought upon her work, when I could make her understand the use of her hands and fingers the first great difficulty was solved. To break up that illiterate conception of finishing something badly and considering it done was my next aim. Then I discovered that the standard they knew must be altered. In other words I found there was a deeper meaning to sewing, and many of the reasons for the careless work to which we are subjected became plain to me. I simply use my observations for illustration.

Therefore it is apparent we must reach out to this incompetency and educate it. And if this, with the children of the poor, is not undertaken quite soon the opportunity is lost; because the pressing need for labor comes to

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them early in life, and they soon drop into the rut of unspiritualized work with all its hardening and dwarfing tendencies.

But turning now to consider whether we can change some of these things, we find every encouragement. In His image we are created, and somewhere in the least undeveloped nature there exists the Godlike. The earlier we unfold the little child's nature the sooner do we find the divine in it.

MISCELLANEOUS.

THESE definitions were written by a girl in a grammar school in a recently given test in geography :

Parallels of latitude are those which mark the boundaries.

The equator is in the middle part of the earth.

Meridians are all over the map.

Latitude is to show where a place is, and longitude is to tell how to get there. W—P.

TAKE care of the consonants and the vowels will take care of themselves. The untrained teacher makes the

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LANGUAGE WORK.

BY M. T. P.

IN the April number there were given some directions to the teacher relative to the use of pictures for language lessons, and a story was printed to illustrate the result of following the directions. It is intended that these pictures shall awaken in the minds of the children a connected train of thought which shall be purely imaginative and yet have a basis in the objects presented in the picture. A language lesson, to be worth the while, should be something more than a mere enumeration of the objects seen in the picture. The mind of the child should have free rein, and should weave a story as fancy dictates and the pictures aid. A story grown up on the picture, be it ever so brief and crude, is far preferable to a catalogue of the objects observed by the child in the picture.

In the picture in this number there are but few objects that attract immediate attention. A covered wagon has halted near a river's bank, a mother and her children are resting on the green grass, a little bird has been discovered by the children, and they are apparently eager to catch the bird, but are restrained by the mother. The picture may seem rather bare and not very suggestive, yet children, who live largely in the realm of fancy, will be able to make out of it stories that will be interesting to read, instructive for them to write, and valuable as real language lessons.

Help the children at first, by asking questions similar to these: "Where do you suppose these people are going? What time of the day do you imagine it to be? Why

have they rested by the river? Why is the wagon covered? What are the animals that draw such a wagon?" etc., etc. Then make a story yourself, illustrating this picture or a similar one, and then ask for stories, not like yours in detail, but a story about two children traveling through the country to a far-off home. Criticise gently, encourage the slow, and stimulate the eager ones. The greatest success depends not a little upon the system with which the teacher develops the work. It amounts to little to give general directions and then leave the children to their imagination, tact, or genius unaided. Children make ruts for themselves very quickly, and without special care

on the part of the teacher the discipline is largely lost after a third or fourth attempt at writing upon any subject or in any given way. We indicate a few ways in which teachers can aid the children in their imaginative study of this picture.

1. Inventing subjects for their language lesson. Each pupil should give a subject. The teacher should write these upon the board. Be patient

until every child has invented a subject. We give several possible subjects suggested by this picture: Waiting for the horses to eat,—The good mother,—A girl's love for a bird,—A boy's fun with a bird,—The bareheaded boy,—The confidence of the bird,—The use of a pail,—Catching a bird under a hat,—The use of a river,—The use of a covered wagon,—Lunching by the river,—A girl's naughty brother,—A kind mother,—Susie's first picnic,—Jack's first journey,—Mrs. Lee's children,—Going out West,—A little bird's first sight of a boy.

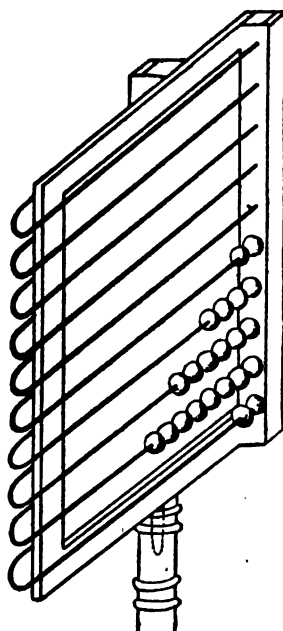
2. Direct the children how to develop the thought, and illustrate by written exercises.



THE COUNTING-FRAME IMPROVED.

BY DR. L. R. KLEMM, OF OHIO.

THIS device I found in an educational exhibit at Augsburg, and its practicability seemed to me so undisputed that I hastened to sketch it. The rather awkward perspective of my drawing is justified by my desire to show the bended rods. The device ought to speak for itself. It is a cunning improvement of the old-fashioned counting-frame. The balls here, alternately colored white and red, appear in front of a blackboard, behind which are shoved all the balls not used at the moment. It can't be called a counting-frame, because it is in fact a small square *blackboard*, fastened on the stand by a pivot, by means of which it is turned around easily without moving the stand. The great advantage the device offers consists in enabling the teacher to hide those balls which are not needed in an operation.



CLAY-MODELING IN THE PUBLIC SCHOOLS.

BY HELEN R. BURNS, BOSTON.

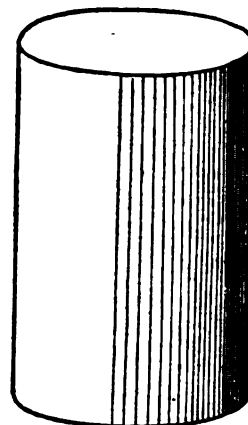
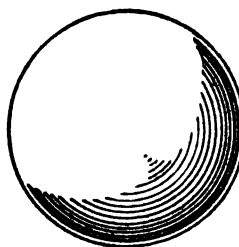
CLAY MODELING, looked upon in its relation to drawing, is, from an educational point of view, one of the most valuable of the manual arts. The educational value of drawing is generally conceded, and it has been well said that to draw without modeling, or to model without drawing, is like an attempt to walk on one foot. By means of modeling the most accurate perception of form may be obtained, as well as most forcibly impressed on the mind, especially on the untrained mind.

The introduction of clay-modeling into the public schools would be attended with many advantages, trifling expense, and few, if any, difficulties. Clay, in good working condition, may be had from any pottery for from one to two cents per pound; and six ounces of clay, a square of manilla paper, or of enameled cloth, to protect the desk, or, better than either, a modeling board about twelve inches long by eight inches wide and an inch or more in thickness, constitute the necessary outfit for the first exercises in modeling type forms.

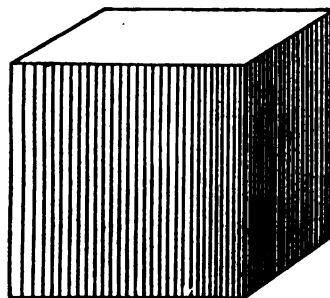
If the clay becomes dry and hard it has only to be sprinkled with water until it absorbs enough to be easily

worked in the hands without adhering to them. If it has been suffered to dry the clay will, after it has been sufficiently dampened, require some manipulation before it is ready for work, and it should be rolled in the hands, or kneaded on a board, until the moisture is evenly distributed. Good working condition will be recognized, after a little experience, as the point at which the clay is perfectly plastic, and, at the same time, free enough from moisture to be clean and comfortable to work with.

For the first exercises in the making of type forms in clay, wooden models, sphere, cube, and cylinder, should be provided for each child to



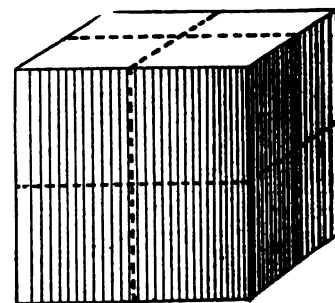
study and work from, and the teacher will gather very valuable suggestions as to the presentation of type forms,



in their natural order from the *Kindergarten Guide*, by Professor and Madam Kraus. When the perception of these simple forms is clear, and acquaintance with their likeness and unlikeness certain, a cube may be made to dimensions,

and subdivided into four or eight equal cubes, by means of a bit of fine wire, while the clay is still damp.

Very careful instructions as to the manipulation of clay at this stage have been prepared by Mrs. Mary Dana Hicks and John S. Clark of Boston, and accompany a set of models. When perfect familiarity with type forms has



been attained, together with facility in their manufacture, what is known as artistic modeling may be commenced; say in the intermediate or the lower grammar grades. At this point it will be necessary to make some provision for the care of unfinished work, which should be covered with woolen cloths wrung out of cold water and excluded from

the air; for this purpose it may be wrapped in enameled cloth, placed in a close-covered box, or in a tight closet, or under a glass shade, whichever is most convenient and will most effectually retard evaporation. If by chance, however, the clay should become dry and hard, it may be coaxed back into good working order by the application of wet cloths.

Let the children begin by making a tile for the design to rest upon; it must be large enough to afford a margin for the design as in a picture, and it is a good exercise to require the children to make it to given dimensions. It should be built up solidly of clay, pressed home to the absolute and certain exclusion of the air. When the tile is well shaped and smooth, and of the required dimensions, build up the design firmly and quickly, smoothing and shaping it with the fingers. Work now from some simple natural form that will permit largeness and breadth of treatment; a bunch of bananas, a plate of eggs, a few lemons or apples, each simple in itself, is a typical model. An acanthus, or an oak leaf, is a good model; the first especially lends itself to decorative purposes and is full of beautiful suggestion. Breadth and simplicity in these first models are prime necessities.

It is well in modeling to depend on the hand, to the exclusion of the tool, in the execution of such simple models as those suggested. The tool will be necessary for only the fine details of finish which later and more difficult studies afford. The more delicate manipulations performed by the hand, in these early stages, lead to a finer dexterity and lightness of touch which will be called into play farther on. The pupil should not be allowed to select his models at random.

In clay-modeling, as in other lines of art and industry, nature has much to teach; but it must be borne in mind that art cannot safely attempt a literal interpretation of nature's exquisite delicacy. Teach the children to reproduce what they can, faithfully and truly, to suggest in clay, and not travesty beauty too subtle and elusive for material representation.

SOME ESSENTIALS.

THESE are certain essentials in every subject taught which the teacher should never lose sight of, nor suffer her pupils to wander from.

1. In the solution of an arithmetical problem :
 1. Accuracy.
 2. Rapidity.
2. In a sentence the properties most essential are :
 1. Clearness.
 2. Unity.
 3. In an oration :
 1. Accuracy.
 2. Propriety.
 3. Ease.

3. Neatness.

3. Strength.

4. Harmony.

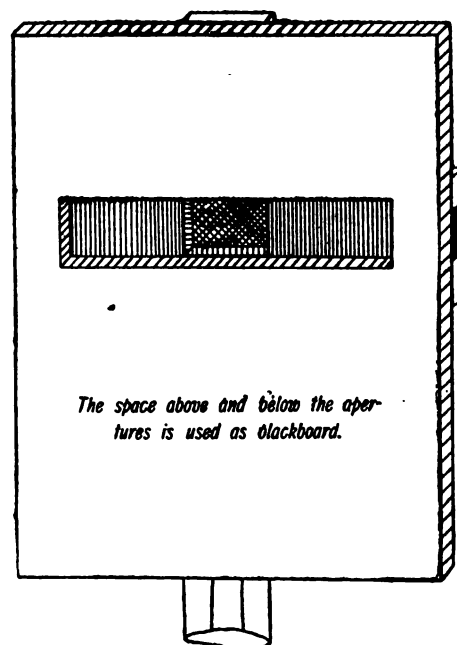
4. Elegance.

5. Agreeableness.

CHIPS FROM AN EDUCATIONAL WORKSHOP IN EUROPE.

BY DR. L. R. KLEMM, OF OHIO.

A TRULY ingenious device is the apparatus I wish to describe to-day. It is used to facilitate the teaching of reading. The two sketches below may assist me in my description.

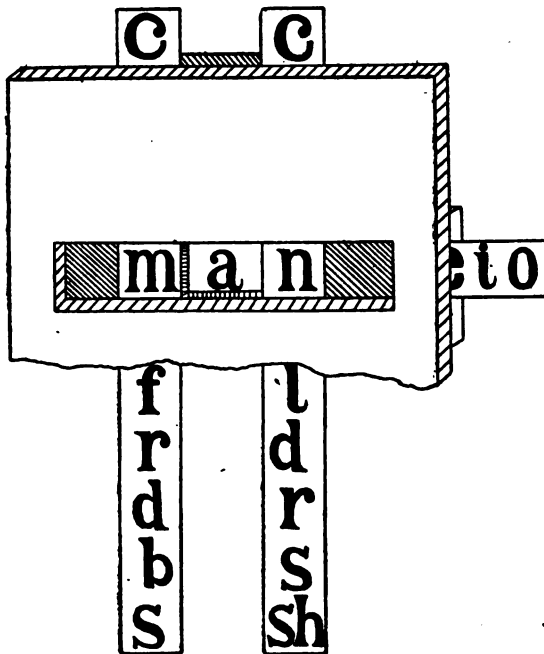


It is a blackboard, two feet square, with three apertures, two of which appear covered by a board in the rear. Into convenient slits are shoved strips of strong pasteboard on which are printed letters or syllables. The strips containing the vowels are shoved from right to left, or *vice versa*; the slats containing the consonants are shoved up and down. Every movement creates a new word, "possible or impossible," but the characters printed on the strips are exceedingly well selected and grouped, so that their arrangement is made easy.

Of course a beginner will find some difficulty in handling the apparatus; but it is quickly learned, and the teacher whom I saw use it, handled it with such a velocity that no awkward pauses interrupted the lesson. There was a great number of slats, some containing only single letters, some combinations, as *ch, sh, st, ck*, etc., others containing syllables which are apt to occur often, as *ba, dis, in*, etc.

The advantages connected with this apparatus consist in this: (1) It offers to the eye of the little pupils only one word at first. Their attention is not diverted by a large number of words, such as are found on a chart or on a page of the primer. (2) The word is easily changed by changing one letter, as for instance, *man* to *can, fan, ran, Dan*, etc. This change is made before the eyes of the pupils who will readily see that the remainder of the word

remains the same. (3) It obviates the difficulty of writing whole strings of words on the blackboard. (4) On the



charts or in the primer the words are fixed, and the pupils are apt to learn them by heart. This is prevented since the words in the apparatus change kaleidoscopically.

The apparatus is accompanied by a box containing some forty to fifty slats. (For the convenience of my English-speaking readers I have pictured English letters in my sketch.)

"POCKET SPELLING LESSON."

BY LULU M. BAGLEY, NEWTON.

OBJECT.—Cultivation of observation and thought.

Point.—Stimulation of interest.

Result.—Addition to child's vocabulary.

Once a week the children are much elated over the teacher's plan of giving them a "pocket spelling lesson," which is a hide and seek game for the words describing and representing the article hidden in the teacher's pocket. Like a similar object lesson, of which we have all read, the something in the teacher's pocket might mean to these wee urchins, a multitude of things which the average man or woman would never think of. A few wild guesses demonstrates this fully.

Useful, necessary, important must be substituted for "good for something," "handy," etc. "Thing" can be dexterously coaxed into object, article, or subject.

Finding that the article is made of a substance belonging to the animal kingdom, he guesses alternate between "something made of leather" and various articles formed of bone.

Because the word *smooth* has been accepted the over-

confident ones are sure that the article is a lead pencil, and that *glossy* is only applicable to a clean collar.

Tough pictures their ideas of durability, and but one little fellow is ready with the word *durable*, but he also volunteers the information that many durable things are also *costly*.

The teacher now comes to the aid of the class, and tells the children that the hidden article is very useful in keeping in order and good condition a company of little white soldiers, who live behind two busy, red, folding doors. Several sagacious thinkers have by this time summed up qualities, uses, and so on, and fairly tremble with excitement as they triumphantly say, "It is a toothbrush."

This toothbrush happens to be made of ivory, and incidentally a few facts are gotten from the children about this beautiful animal substance. (For a future object lesson ivory and its uses will furnish material for a most interesting exercise.)

Just now follows a bit of hygiene in the form of a talk about the use and care of teeth. During the exercise the following words were used and written on the blackboard;

article	elephant
important	tusks
durable	opaque
preserve	costly
ornamental	ivory

The words are spelled orally and written twice.

The children are then sent to the blackboard in pairs, and one of each pair writes two or three sentences about the subject of the lesson, the closing sentence being a question. The child beside him is expected to answer this question, write two or three sentences, and in turn asks a question. The following sentences from an actual exercise will serve to show method and result:

Edward writes: "I wish that I had an elephant. I would give him lots of peanuts. Don't you wish that you had one, Bessie?"

Bessie writes: "No, I would rather have a cow. A cow is more useful. How much does an elephant cost, Eddie?"

Eddie: "I do not know, Bessie. An elephant is an immense animal. Did you ever see a live elephant?"

Mary: A toothbrush is a useful article. Little girls must not crack nuts with their teeth. Will your mother buy you a toothbrush, Alice?"

Alice: "I have a toothbrush. We ought to brush our teeth every day. Do you know where ivory comes from?"

I have found this little method of "chalk talk" most helpful in leading the children into the art of simple correspondence, and in it they naturally use capitalization and the points of punctuation that occur in every day letter writing. And then it is a change from the old, old story: "Children, write five 'telling,' and five 'asking' sentences."

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ONE of the most acceptable methods of keeping pupils busy, as it is one of the most successful ways of inducing children to learn to spell, is by means of the old-time game of "Anagram," which if any teacher does not recall, is simply the handing to the class in a mixed condition the letters of a word as

i r
t l o
e

and expect them to put them together. Several conditions should be observed to make it profitable.

1. Select everyday words at first.
2. Select short words at first.
3. Have each pupil rise as soon as he is through.
4. Have a record kept for weeks of those who are among the first ten to get out a word
5. Let the children who fail select words for the class half the time, and those who succeed half the time.

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To Those into whose hands this may fall as previously unheard news, we offer the following clippings from the Cleveland Plain Dealer of May 2, 1888, in explanation:

"A STARTLING BUSINESS CHANGE — THE BURROWS BROTHERS COMPANY BUYS THE ENTIRE STOCK AND GOOD WILL OF COBB, ANDREWS, & CO.

"Book buyers in this part of the country will learn with surprise that the mammoth book house of Cobb, Andrews, & Co. has been absorbed by The Burrows Brothers Company. The following card tersely sets forth the facts:

"The business, stock of goods and good will of our firm is this day sold to The Burrows Brothers Company. The partners, J. B. Cobb, B. J. Cobb, C. C. Cobb, and T. A. Andrews, retire from business. We will settle all the affairs of the late firm ourselves. We bespeak for our honorable successors the continuance of the generous patronage which has for so many years been accorded to us by the Cleveland public. After nearly fifty years of service in this city we trust to enjoy our retirement and leisure.

"C. O. COBB, } "For Cobb, Andrews, & Co."
"B. J. COBB, }

"The energy and tact of Burrows Brothers have now placed them at the front in the book business in this region. Their advancement has been meteor-like. A few years ago they were comparatively unknown. To-day they have the proud satisfaction of having purchased the entire stock and the good will of their only great and formidable rival. They have one of the most elegant stores in the world, a veritable book palace, and there is no longer any one to dispute their supremacy in the trade. Their guiding principles have been to sell goods at the lowest rates consistent with stability of business, and to treat all customers alike. On that basis they have attained their present pre-eminence, and on that basis they propose to continue.

"The long-established firm of Cobb, Andrews, & Co. has been for many years one of the most conspicuous of the solid mercantile houses in this city, and its business had attained a magnitude of which the partners perhaps never dreamed in their earlier years. The Messrs. Cobb, after half a century of active life, retire from business to enjoy the competence they have acquired. They are ready to give way to younger men, and in withdrawing from the field they no doubt feel gratified in the assurance that their successors are every way qualified and worthy to take up the scepter where they lay it down, and to wield it with grace and wisdom."

By this purchase we become possessors of the largest stock of books and stationery outside New York, Philadelphia, and Chicago, in the country, (excepting always our own, for we already had under our own roof considerably the largest stock and block devoted to the book and stationery trade in the country, with the exceptions noted above).

What was our object in buying? Not to get more stock? That we have always found the publishers and manufacturers more than ready to furnish us, but to secure a wider field, to relieve ourselves of a strong, though honorable competition, and in a word to have the chance to buy larger, do more, and sell cheaper, and yet at a greater net profit.

We can do the double business by adding very little to our expenses, hence at a less percentage. We have already a force thoroughly equipped and are sending our travelling representatives to the retail book trade in a dozen or more different states, while our Library trade and mail orders extend into every State in the

Union. For an example, where the two firms were each sending a man into Michigan, paying two salaries, double costs for extra baggage, hotel bills, car fares, sample trunks, and samples and the like, we can do with one man more than either of us did with the two.

That means that we can, and we mean that we shall, continue for the future as in the past to sell you cheaply, and that it will serve your best interests to become our customers.

Now however, to a different point; as we have said we did not buy in order to get more stock, neither did we buy to keep. We always buy to sell, not to keep.

We have rented the store occupied by the Cobbs for four months longer and during that time our object will be to convert into cash every dollars worth of their stock not absolutely needed in our own trade. During the early summer and up to about August let we shall place such prices on the entire stock as have never been made before in this country. Now is your opportunity, and whether you are a peddler, selling paper on the street and living in Cleveland, or the buyer for a successful city book store having a large and wealthy patronage and residing a thousand miles away; whether you are the Librarian of a small town, school or Sunday School library having a few hundreds of volumes; or filling the same position for one of the noted Libraries of the land, which is known beyond seas even; whether you are the lover of elegant editions de-luxe, printed on velvety paper, bound in rich morocco or calf; or the office boy who wishes to buy a book for twenty-five cents; whether you desire a gross of cheap pass books for a business firm, or a sterling silver trimmed pocket-book of Gorham's make; whether you are any one or none of these, provided you have any wants which are present, or even prospective, then you, each and every one into whose hands this may fall—you personally—are interested in this sale.

And right here we would say, that as our late competitors have been in business nearly half a century, with slight changes of title, they have accumulated a great variety of rare and valuable books and editions, some of them slightly shopworn, but just as valuable. They have also accumulated quantities of everything and anything in every and any line that must be turned into money at far less than their original cost.

Please remember further that this is not the clearing out of a run-to-seed stock of a bankrupt firm, but a disposal of the goods of a live business house bought by men of judgment who retire from business because the competence they have acquired during an unusually long and successful career has earned them the desire, the need, and the right to retire permanently from all business care and work.

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